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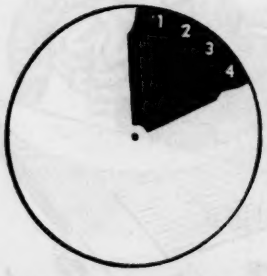

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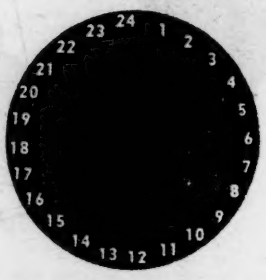

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An Address.[1]

By G. RALEIGH WEIGALL,

Retiring President, Victorian Branch of the British Medical Association.

I WISH in the first place to thank you for the privilege of having been your President for a year. As I said from this place a year ago, I greatly appreciate the honour you did me in electing me. Now at the end of the year I appreciate it even more, because I more fully understand what the position means and the privileges and responsibilities which go with it. In particular I appreciate the loyalty and cooperation of the Council, of Dr. Dickson and of the office staff. For this I am duly grateful, and when once this paper is finished I shall be able to relax and sit back and enjoy the recollection of my year of office. But before I can do that the obligation is imposed upon me of delivering this valedictory address.

That brings me to the first point I want to make, and that is to suggest that the president should deliver his address at the beginning of his year of office instead of at the end. I think this would be better for several reasons. Firstly, it would serve as an introduction to the members of the fact that he had become the president; otherwise many do not seem to know until he signs a circular letter to them or his name gets into the paper, usually associated with distortion of some views he has been cajoled into expressing on some matter of public interest. Secondly, it would give a new president a chance to deliver at this annual meeting what in effect would be a sort of policy speech, in which he could set out his views on matters which might concern the Council and the Branch during the coming year. Councillors and members would thus have an opportunity to think over and discuss matters that the new president might raise and be better able to get on with any new work in this direction in the early meetings of the year.

This is the plan which is carried out in all the other States, and the only reason against it that I have heard of is that with our present arrangement of election the new president is not officially known as such until the evening of this meeting. This difficulty could, and I think should, be overcome by the senior vice-president being designated the president-elect, and knowing for a year in advance that when he assumes office he will have to do what I am doing now. This would have the further advantage that the man concerned would more properly represent the Association on occasions when the president cannot be available. The "president-elect" sounds a more important person than a vice-president, and the other appellation that I have heard employed—"Mr. Senior Vice"—has a sinister implication which is by no means always merited by that officer. But, introduced as the president-elect, he could relieve the

[1] Read at the annual meeting of the Victorian Branch of the British Medical Association on December 1, 1954.

president at some of the functions and meetings where suitable representation of our Association is expected with greater ease and satisfaction to himself and to the gathering at which he represents us.

I leave this thought with the Council for possible action before the next annual meeting, though I realize that it is put forward too late to do me, or you, any good tonight, and it is by precedent my duty to address you now on a subject which I have the privilege of myself selecting.

I have a further unfair advantage in that the paper is not open to discussion tonight, and the chairman will give you no opportunity of asking me awkward questions from the body of the hall when it is over.

From experience of many such meetings in the past, I was aware when I first set out to prepare this address that I should probably be speaking to a gathering largely composed of fellow Councillors, past and present, many of whom have been through this chair, and others among the seniors of the medical profession who are good enough to come along and lend this meeting the standing it should have. So obviously a paper of a purely didactic or instructional nature would ill become me, as would any sort of historical review based on less years of professional experience than many of my listeners have had. But much of what I propose to say will be controversial, and I hope of sufficient interest to arouse discussion amongst us afterwards, and perhaps if some of the points I raise appeal to you, action towards their correction may be undertaken later.

I have endeavoured to collect in my mind certain examples of errors in thought and practice which we perpetrate, or at least tolerate, in this community, often directly against our own judgement and knowledge, and some of which I think militate against the best interests, maximum efficiency and well-being of the people to whom we should act in these matters as guides, advisers, and possibly examples.

The first and perhaps the most obvious of the instances of this sort of thing is the way we tend to think that the new must be better than the old. A great deal of what one can only regard as a form of self-aggrandisement is commonly indulged in nowadays, with stress on how much superior we are to past generations and how much better we do things than they were done then. But when you think of what they had and did, say forty or fifty years ago, you must feel that they had much to be proud of. Music, art and literature are fields in which our forebears set a standard which to many of us is preferable to the modern substitutes. However, that may be a matter of taste, and consequently less applicable than more concrete examples of their skill and ability: great public buildings which stand proudly looking down on modern gimcrack affairs of glass and cement; reservoirs and aqueducts built by men with only spades, horses and drays, which have stood the test of time, and which were adequate for the needs of this growing community for seventy years and are still functioning perfectly and now need only supplementing. Mail steamers forty years ago carried out their scheduled trips from Melbourne to London, taking only two or three days longer than the floating palaces do now with all their engineering progress and modern advantages. Even motor-cars, in their infancy forty years ago, on roads ill adapted for their use and with infrequent service stations to keep them functioning, went very well, and many are still going —which, I am sure, will not be able to be said of the "pregnant whales with false teeth" which have succeeded them. All forms of craftsmanship were carried on at a higher level than we demand now—or at least, than we get. How often do you hear the expression "pre-war quality", meaning something of higher standard than we can expect now—whether it be suit material, carpentry tools, whisky, watches, furniture or almost anything else? How often do you hear, when you complain of a shoddy article or a bad job done at an exorbitant price, "Oh, that is the best you can get now", or "That is how it is always done now"? The opinion of men who did all these things should not be lightly set aside; they had wisdom, judgement and experience, and took pride in their work. They would not have evolved and carried out a line of action unless it were of proven merit.

Is it reasonable, then, in medical practice to drop old and proven methods of treatment, which alone cured many patients a generation ago, for some new drug whose virtues may have been established only in a laboratory, or in an inadequate series of patients treated under different conditions from our own and in a different country, and which perhaps has not been used on anyone for long enough for the later, possibly disadvantageous, sequelæ of its use to be apparent?

So many articles have been written recently on the abuse and misuse of antibiotics that I do not propose to speak on that subject at any length. You have all become aware of the failing power, for instance, of penicillin to help us against organisms against which it was so effective a few years ago. Its overuse for prophylaxis and for pimples and other minor ailments has lessened its usefulness in serious and dangerous conditions. I know it is in many cases the patient and his friends, blessed with a little knowledge, who have talked us into using new forms of treatment, perhaps against our judgement; but we should be strong enough to resist their persuasiveness, and be able and willing to explain to those laymen who can understand them the reasons for withholding the antibiotic of their choice or the latest form of treatment advocated in the popular Press. We should, I contend, retain some faith in the patient's ability to overcome trivial infections by establishing his own resistance, rather than assist in the building up of strains of resistant organisms, and of a race of patients who depend on antibiotics to beat their enemies for them, and who will thus be more likely to succumb to an infection for which we can find them no artificial answer.

A recent eminent visitor, Dr. W. W. Ingram, who spoke against the overuse of these modern agents, powerful for evil as well as for good, quoted a case which emphasizes the point I wish to make. He spoke of a patient he had seen, suffering originally from a trivial skin infection, which he said would no doubt have responded well to antiseptic ointments. The patient had, however, been treated with penicillin, which had produced a startling allergic response. This complication was then treated with antihistamine drugs, which in turn produced such mental depression and lethargy that when Dr. Ingram examined the patient he had been over-treated with "Benzedrine".

Of course, I am not foolish enough to belittle the advantages of properly directed modern treatment; but the points I want to make in this connexion are two:

1. It is not wise for a man who treats only a few patients suffering from a particular disease to rush at once, unguided except by hearsay, to the use of the powerful new remedy of which he has just heard or read. Take as examples if you like the anticoagulants, the hexamethonium compounds, "Butazolidin", whose use may be fraught with complications worse than the illness he is treating. He cannot quickly acquire enough experience with the drug to use it wisely, nor can he hope to collect a statistically significant series of cases to further his knowledge of the use of such drugs. His proper course, I feel sure, when such a new therapeutic star swims into the firmament of medical literature, is to get the help of some consultant, who has had adequate experience with this agent and whose judgement he trusts, to advise and direct the treatment in the first few cases he thinks may be suitable.

2. Secondly, such a practitioner tends to place all his faith in the modern remedy, and to abandon the older procedures which could well be employed, at least as ancillary measures. For example, the "case" of pneumonia is apt to be thought to be completely treated if adequate doses of sulphadiazine and/or penicillin or some other antibiotic are ordered. There is surely also a place for the other measures in treating the "patient", with which alone he generally recovered a generation ago—the oxygen to save his heart muscle and relieve his efforts to get enough air into his sore chest, the diaphoretic mixture with a little cough sedative, the morphine for his pain and rest-

lessness, and the intelligent nursing measures which save his strength and make his illness more endurable; there is even a place for the occasional dose of brandy which, as I remember Sir Richard Stawell teaching us, had its value in making the patient feel better, so that it was worthwhile trying to recover. Let us remember that we are treating a patient *in vivo*, and not a disease *in vitro*, and do what we can to counteract all the effects of the illness, and not only its infective, biochemical and pathological aspects, against which science may have given us a new weapon.

With regard to the maintenance of an adequate sense of balance in respect to new laboratory methods of diagnosis, something of the same sort may be said. Many ingenious tests are continually being introduced, and I willingly pay a tribute to the "back room boys" who discover them, to the clinicians who investigate their practicability and usefulness, and also to the patient who endures them. Many such tests, it is true, involve only minor discomfort to the patient, such as venupuncture or gastric aspiration; but in some of them he is subject to considerable pain and shock, even to risk, as in encephalography and cardiac catheterization. All of this is thoroughly warranted and worthwhile for the patient if it is going to produce a result which will indicate the advisability of a form of treatment which will shorten his illness or improve his chances of recovering from it. But, with regard to the possible over-use of such investigations, I should like to quote from an article by Richard Asher in the *British Medical Journal* of August 21, 1954, who makes these points much more tellingly than I could have done:

> In the ordering of laboratory or radiological investigations rational thinking is necessary. It is a salutary exercise in mental discipline to catechize oneself when ordering any medical investigation, saying, "Why do I order this test? What am I going to look for in the result? If I find it will it affect my diagnosis? How will this affect my management of the case? Will this ultimately benefit the patient?"
>
> Perhaps it would be a good idea to have a space on every laboratory form in which the doctor had to state exactly why he had ordered a test. I believe if answers were honestly filled in we might get this sort of thing:
>
> 1. I order this test because if it agrees with my opinion I will believe it, and if it does not I shall disbelieve it.
>
> 2. I do not understand this test and am uncertain of the normal figure, but it is the fashion to order it.
>
> 3. When my chief asks if I have done this or that test I like to say yes, so I order as many tests as I can to avoid being caught out.
>
> 4. I have no clear idea what I am looking for, but in ordering this test I feel in a vague way (like Mr. Micawber) that something might turn up.
>
> 5. I order this test because I want to convince the patient there is nothing wrong, and I don't think he will believe me without a test.

With regard to the too ready acceptance of the clinical importance of laboratory findings, Asher goes on as follows:

> As regards tests of function, are we not inclined to argue: (1) this test measures the conjugation of benzoic acid; (2) the conjugation of benzoic acid is a function of the liver; (3) therefore this test measures the function of the liver? Might we not equally well argue: (1) this factory produces smoke; (2) this test measures the amount of smoke produced; (3) therefore this test measures the productivity of a factory? The point is that livers and factories both do a number of things, and measuring one of these things does not measure all of them.

I should not like to see so much significance attached to these laboratory tests, or so much dependence placed on what should be aids only to diagnosis, that old and proven methods of clinical examination and the advantages of accurate history taking are pushed further into the background. For example, one sometimes feels that the examination of a patient's chest by inspection, palpation, percussion and auscultation is done rather cursorily because, as one says, "he is going to have an X-ray anyhow".

We must not let students and resident medical officers forget that they can find out things by these old-fashioned ways which will not be revealed by any other method, and that when they leave their big hospitals there will be many times when they have to depend on their skill in these ways, backed by experience of having used them frequently and thoroughly.

This brings me to the question of student training. We are all very proud of the standing of our Melbourne medical degree, and certainly the poor boys and girls are taught a great deal in a long time—so much so that they are bewilderingly erudite when they become hospital resident medical officers and rather bewildered themselves, too. I sometimes think that by the very nature of the places where they are taught—large hospitals that deal only with cases serious enough to warrant the use of one of their precious beds—that they get an ill-balanced idea of the types of illness which really prevail in the community, and which they will later be called upon to treat. They fail to learn that the common things are commonest, and have very little teaching on how to deal with the minor ailments which will constitute so much of their work if they go into general practice, which three-quarters of them will do. What teaching they have about colds, tonsillitis, influenza, lumbago, minor cuts and sprains, removal of foreign bodies from the eye, and about emotional women with psychological disorders, is gained in six weeks in the casualty departments, where they are taught only by resident medical officers and registrars, who themselves have had no experience of practice. One hopes that the introduction of professors of medicine and surgery into the teaching school of the faculty is not going to increase the academic side of the students' training still further out of proportion to the practical training they receive.

The initiation in the last few years of a period of two weeks' general practitioner training is an important step in the right direction. I am told that that is all the time that can be spared for this out of their crowded six-year curriculum. I cannot help thinking that some of their present training might be left to post-graduate teaching for specialist degrees, and a larger proportion of time devoted to ordinary doctoring for the ordinary doctor's "M.B., B.S.".

Much the same applies to the training of nurses, which I maintain tends to be far too much devoted to theory and the scientific aspects of illness, and not enough to the practice of nursing.

I must confess that until recently I had no idea how far this went, though I had lectured to and examined nurses in my own subject for many years. But I have recently had a daughter doing her training and bringing her text-books and lectures and worries to the family fireside, and I find some things which may astonish you as they did me. For example, under the heading of dietetics they were expected to comprehend the biochemistry of metabolism to the extent of knowing about the twenty kinds of amino acids formed in the digestion of various proteins and their alleged role in the production of certain hormones: and this is from a tutor sister's notes, and not from some over-enthusiastic medical lecturer carried away by interest in his own specialty. This is for a girl who had no basic training in chemistry or physics, which subjects are not prerequisites, and who had never before heard of the elements involved, except perhaps of carbon as charcoal or phosphorus as a rat poison. They are expected to learn about osmosis who have never heard of a colloid or a semipermeable membrane or had any knowledge of hydrostatics.

In anatomy they are taught the names and articulations of the small bones of the hand (made no easier by their lecturer using one nomenclature and the text-book the other), the intrinsic and extrinsic ligaments of the knee joint, and also the foramina of the base of the skull. The histological features of the liver, pancreas and kidney they are expected to know as well as I ever did in my medical course, and the physiology of these organs to an extent far beyond the requirements of a nurse.

Pharmacology and therapeutics include not only the dosage and effects of a drug, but its mode of action—and so on into realms which are surely far more academic

than need concern a nurse who is to administer such treatment under the direction of a doctor.

All this is expected from girls of eighteen years who entered the course because they thought they would like to tend the sick and learn nursing. The importance and responsibility of their work are rightly stressed, and the necessity of passing examinations in these subjects thus taught is also emphasized. Thus the sensitive and conscientious trier, who probably would make a very good nurse, may be frightened out of going on with the course, and may put off friends who ask her during this first year what it is like when they are deciding what to do themselves. This may well explain the shortage of girls offering for nursing, and the numbers who drop out before completing their training, the result being a shortage of nurses which has closed many beds in our hospitals.

Another effect of this extensive teaching in theoretical considerations is that less time is available for practical training at the bedside. It seems wrong for a girl to spend so much time at lectures, studying them and her text-books and being examined in them, that the first time she gives an enema, passes a Ryle's tube or gives a hypodermic injection she may do so from lectured instructions only.

What ordinary people call nursing is pushed into the background, or learnt only incidentally, while the student nurse is instructed in the medical or surgical intricacies of the patient's disease and in administrative duties of the ward. The result is that a girl may finish her course with a sort of second-rate "M.B., B.S." training, but with very little idea as to how to make a sick patient comfortable.

I am told, in reply to these arguments, that many medical and surgical treatments now are so essentially founded on physiological or biological aspects that a nurse cannot adequately perform her duties unless she knows the scientific basis of these cases. I maintain that she cannot learn all that and nursing too in the three years of fifty weeks of forty hours which constitute her period of training. Let her be taught more nursing in this time, and later, if she wants to be a theatre sister or a nurse who is particularly good at intravenous therapy or whatever it is that calls for such extensive scientific training, let her do a post-graduate course in these as nurses now do in midwifery and infant welfare.

Since drafting these notes I have been pleased to read that at the recent Nursing Federation Conference in Adelaide a motion was passed declaring the present curriculum to be grossly overloaded, and urging that greater emphasis should be placed on bedside care in the basic period, and that committees, Federal and State, were to investigate the position before the International Nursing Congress in Melbourne in May, 1955.

I suggest to those of you who feel as I do about it that we should support this change and give our advice when it is asked, or even if it is not, in the direction of helping this improvement in nursing training.

Conclusion.

I feel that I have wandered about from one subject to another in a way that calls for an apology or explanation. The common link that joins the various themes on which I have addressed you is this—they are all things which members of this Association in their various fields could do much to improve—some of us as practising doctors, some as teachers at our hospitals, some as members of the Branch Council, of the Faculty of Medicine or of boards and committees which direct and advise on medical and allied subjects, and all of us as men and women whose opinions and advice in our own field should not be lightly set aside. If you are able to agree with any of the points I have raised, I hope you will use your efforts to help correct the anomalies I have pointed out.

I much appreciate the opportunity I have had of speaking to you on these topics, on some of which, as you may have gathered, I hold rather strong views. I do not expect that ever again shall I have a chance of saying so much of what I want to say to such an audience, and I thank you most appreciatively for having listened to me as you have done.

BIRTH WEIGHT, PREMATURITY AND GROWTH RATE TO THIRTY MONTHS OF THE NEW GUINEA NATIVE CHILD.

By R. F. R. SCRAGG,
Port Moresby.

MEASUREMENTS relating to birth weight, prematurity and growth rate to thirty months made by various workers, including myself, have been correlated to give the tables and averages listed below. They are from several different areas of New Guinea and are presented as representative of conditions throughout the Territory.

Sources of Material.

Birth weights are from two sources: those for New Ireland natives from all births at the Kavieng Native Hospital and Kimadan Methodist Overseas Mission Hospital during the three years to January, 1953; those for Rabaul natives from all births at the Rabaul Native Hospital over the same period. The weight increase to thirty months was calculated from the weighing of babies and infants in the Kavieng Sub-District of New Ireland.

Birth Weights.

The figures relating to birth weights are for live births only. Table I gives a comparison of the range and means for Kavieng (New Ireland natives), Rabaul (Blanche Bay natives), and England (Caucasian—McKeown and Gibson,

TABLE I.

Comparison of Mean Birth Weights (Pounds): Kavieng, Rabaul and England.

Area.	Sex.	Number.	Minimum Weight.	Maximum Weight.	Mean.	Standard Deviation.
Kavieng ..	M.	189	2·63	8·44	5·84	1·13
Kavieng ..	F.	204	2·13	8·00	5·87	0·94
Rabaul ..	M.	583	1·38	9·81	6·64	1·18
Rabaul ..	F.	524	2·31	9·47	6·34	1·06
England ..	Both.	—	1·00	16·00	7·46	1·20

1951). The means in New Guinea babies range from 5·84 to 6·64 pounds; the mean is 7·46 pounds for the English babies. Corresponding differences from Caucasian mean weights have been found among African native babies (Salber and Bradshaw, 1951), and, between different African tribes and social groups, a variation such as that found between Kavieng and Rabaul has also been noted.

Rabaul babies weigh more heavily than those from Kavieng; the difference of the means is 0·80 pound for males and 0·47 pound for females. Statistically, the mean weight for Kavieng is significantly different from that for Rabaul, the observed difference being eleven times the standard error of the difference of the means. A possible factor in this weight difference is that the Rabaul natives have an unending supply of bananas and are never hungry, while the Kavieng natives use sago as their staple food and eat only small amounts of bananas. As sago takes some time to prepare for consumption, natives using it as their staple food may starve for short periods. The protein intakes in the two areas appear to be equal. The actual reasons for the weight difference may be discovered by further study. The question whether there is any difference in adult stature has not been investigated.

A group of the Kavieng women were in hospital awaiting delivery for a period of one to two months, and during this period they received rations based on the National Medical Research Council recommended dietary allowances. The birth weights of their children averaged no more than those of women who entered hospital only a week or less before delivery. It thus appears that to increase the average birth weight better feeding of the mother through the entire period of pregnancy is necessary.

A more pronounced fall in weight during the first week of life was noted amongst the Rabaul babies than among the Kavieng babies. Those from Kavieng could thus be expected to make good the major part of the birth difference within the first few weeks of life. In Kavieng there was not the usual variation between male and female mean birth weights. It is suggested that the weight registered is a minimal weight for babies at birth, and not sufficient for the sexual differences found in babies of greater birth weight to occur.

Prematurity.

The average weight of the Kavieng babies is only 0·36 pound above the recognized international standard for prematurity of 5·50 pounds, and that of the Rabaul babies only 0·99 pound above this standard (Figure I). Thus a different standard of prematurity for these two groups of babies is necessary.

In native women the age of the fœtus at birth cannot be obtained from the length of gestation, as calendars are not known, and the interval between succeeding menses is vaguely related to their only record of time, the moon. Native women recognize the absence of a menstrual period as indicating possible pregnancy, but relate pregnancy to the commencement of "morning sickness", and are certain that they are pregnant only after feeling movements.

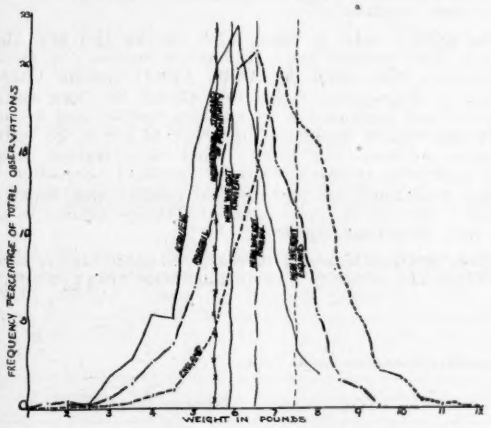

FIGURE I.

Frequency distribution of birth weights: Kavieng, Rabaul, England.

An attempt has been made below to form a new standard for use among New Guinea natives and other people with similar birth weights, by considering the three factors of frequency distribution of birth weights, survival at low birth weights and mean birth weight in relation to corresponding figures for English babies.

Figure I compares the frequency distribution for Kavieng, Rabaul and English babies. The sexes are combined in all groups. Babies weighing under 5·50 pounds include 5·62% of English, 15·01% of Rabaul and 30·05% of Kavieng babies. The international standard of prematurity of 5·50 pounds corresponds by proportion to 4·32 and 4·72 pounds in relation to the mean birth weights for Kavieng and Rabaul respectively.

Tables II and III give a comparison of stillbirth and neonatal mortality in relation to birth weight. The figures for England used in these tables are from McKeown and Gibson (1951).

When these mortality rates are considered, the standard of the health services in the two different parts of the world is important. In New Guinea one trained nurse has to care for up to 30 babies under primitive conditions, as well as attending to one or two births a day. Accordingly, the standard of care available for premature babies in no way approaches that in England; but babies of the same weight have much better survival rates. New Guinea native babies weighing 3·0 to 3·5 pounds have the same mortality rates as babies weighing 4·0 to 4·5 pounds in England, and babies weighing 4·5 to 5·0 pounds in New Guinea the same mortality rates as babies weighing 5·5 to 6·0 pounds in England. In New Guinea there is no special care for babies weighing over 4·5 pounds. Only those under this weight are given special nursing, feeding, and protection from exposure.

In establishing a standard of prematurity, the number of months during which the fœtus has been in the uterus and the resultant degree of maturity are the decisive factors. If a child weighs six pounds at full term it has the equivalent chance of survival of a child weighing 7·5 pounds at full term when the mean weights of the two groups are 6·0 to 7·5 pounds respectively. Accordingly, in proportion it is estimated that a child weighing 4·5 pounds from the former group has spent as long in the uterus as a child weighing 5·5 pounds from the latter group. Houghton and Ross (1953) considered that the finding of 16·1% of babies weighing less than 5·5 pounds in their study indicated a high incidence of prematurity; but it is better to consider that all native babies are under weight, and relate full term to the mean birth weight and lower the base line for prematurity accordingly.

TABLE II.

Comparison of Neonatal Mortality Rates in Kavieng and England in Relation to Birth Weight.

Birth Weight. (Pounds.)	Kavieng. Number Born Alive.	Kavieng. Number of Neonatal Deaths.	Kavieng. Percentage of Neonatal Deaths.	England.[1] Percentage of Neonatal Deaths.
2·0 to 2·5 ..	1	—	—	83·0
2·5 to 3·0 ..	2	1	50·0	66·0
3·0 to 3·5 ..	8	1	12·5	42·0
3·5 to 4·0 ..	11	1	9·1	32·0
4·0 to 4·5 ..	24	3	12·5	16·0
4·5 to 5·0 ..	26	2	7·8	7·0
5·0 to 5·5 ..	59	0	0	7·0
5·5 to 6·0 ..	78	0	0	3·5

[1] Figures for England from McKeown and Gibson, 1951.

TABLE III.

Comparison of Percentage of Stillbirths and Neonatal Deaths in Rabaul and England in Relation to Birth Weight.

Birth Weight. (Pounds.)	Rabaul. Total Births.	Rabaul. Number of Stillbirths.	Rabaul. Neonatal Deaths.	Rabaul. Percentage of Stillbirths and Neonatal Deaths.	England: Percentage of Stillbirths and Neonatal Deaths.[1]
1·0 to 1·5	1	—	1	100·0	100·0
1·5 to 2·0	4	1	3	100·0	100·0
2·0 to 2·5	5	1	4	100·0	91·8
2·5 to 3·0	5	3	2	100·0	83·3
3·0 to 3·5	6	—	2	33·3	63·2
3·5 to 4·0	14	—	5	35·7	53·9
4·0 to 4·5	24	1	—	3·2	31·2
4·5 to 5·0	34	—	2	5·9	18·8
5·0 to 5·5	76	1	1	2·6	13·6
5·5 to 6·0	131	1	1	1·6	6·7

[1] Figures for England from McKeown and Gibson, 1951.

If the foregoing observations and experiences are combined, it is apparent that in New Guinea only babies weighing under 4·50 pounds should be considered to be premature. When this figure is used as a standard of prematurity, 13% of babies born in Kavieng are under this weight and 5·2% of those born in Rabaul. In England 5·6% of babies born were under the recognized standard of 5·50 pounds. However, any improvement in the mean birth weight in New Guinea will mean an appreciation in

the figure of 4·50 pounds as it is related to the ability of underweight but mature babies to survive; with an increased mean birth weight this ability will fall towards the level which occurs in English babies. As an addendum to the foregoing remarks it is considered that babies weighing under five pounds should be nursed as premature on account of the already high infant mortality rate in New Guinea.

Weight Increase from Birth to Thirty Months.

The Kavieng babies whose mean birth weight is reported above were weighed regularly in the course of the infant welfare activities in the Kavieng Sub-District. Six hundred and fifty-one babies and infants were followed for varying periods. The figures on which the averages below are based are from actual weighings, except in some cases in which a child was not examined for two months. In these the middle figure between the two weighings was used. From sixteen days on there were 3643 figures for male weights, of which 873 were estimated as above, and 3449 for females, 798 being estimated. Three hundred and thirty infants were followed to the age of five months; but from there the number falls off month by month, and only 70 were followed through to thirty months. All children, even though premature or from multiple births, were included as shown by the range of the observations.

TABLE IV.

Change in Weight in Relation to Birth Weight During the First Ten Days of Life.

Day After Birth.	Number Observed.	Number Observed Showing			Average Difference from Birth Weight. (Pounds.)
		No Change.	Weight Increase.	Weight Loss.	
1	4	1	1	2	−0·05
2	17	4	5	8	−0·05
3	25	8	2	15	−0·05
4	43	19	17	7	+0·05
5	36	13	18	5	+0·09
6	42	9	26	7	+0·09
7	66	16	41	9	+0·16
8	54	14	34	3	+0·29
9	49	6	42	1	+0·38
10	265	11	241	13	+0·42

For the first ten days variations from the birth weight were calculated, and from these an average change was calculated as shown in Table IV. The large number still below their birth weight at ten days were below it earlier in this period. They were a small group who failed to grow at the normal rate, usually owing to lack of natural feeding or prematurity, but only a minority on account of the former. Hospital records kept in Rabaul showed that infants born there usually fell in weight during the first few days and regained their birth weight about the seventh day. These Rabaul babies having a higher mean weight were in a position to lose some weight; but, as was mentioned previously, those from Kavieng had a basic minimum of weight and did not lose much weight, regaining their birth weight by the fourth day in most cases.

Table V shows the calculated mean weights and standard deviations. Figure II is a graph of the increase in weight of males and females in Kavieng compared with the corresponding figures for English children as shown by Gore and Palmer (1949). The increase among the New Guinea native children is regular. The difference in weight between males and females is constant at 0·6 to 0·8 pound after three months.

The growth rate is most rapid during the first three months and exceeds that of English babies. A similar observation was made by Millis (1954) among Chinese babies in Singapore. After this period the New Guinea native infant increases in weight less rapidly, and between three and twelve months a difference of 5·0 to 5·5 pounds develops between the English and New Guinea means. This difference remains relatively constant thereafter. A similar difference of four to five pounds was found by Millis (1954) when she compared Chinese infants of this age with European children.

These different rates of increase are more clearly shown in Figure III, which is a semilogarithmic graph comparing

TABLE V.

Actual Mean Weights (Pounds) and Standard Deviations of New Guinea Native Children.[1]

Actual Age.	Males.					Females.				
	Number Observed.	Weight.				Number Observed.	Weight.			
		Minimum.	Maximum.	Mean.	S.D.[2]		Minimum.	Maximum.	Mean.	S.D.
Birth	189	—	—	5·84	1·13	204	—	—	5·87	0·94
10 days	—	—	—	6·26	—	—	—	—	6·29	—
16 days	145	2·88	9·69	6·62	1·29	144	2·09	10·44	6·62	1·20
3 weeks	100	3·50	9·69	6·98	1·44	108	2·31	10·63	6·95	1·40
4 weeks	87	3·56	10·00	7·43	1·58	95	2·44	11·38	7·50	1·56
5 weeks	71	3·47	11·00	7·94	1·91	75	2·63	11·75	8·03	1·68
6 weeks	80	4·00	13·13	8·64	1·92	81	2·88	11·94	8·43	1·68
7 weeks	79	4·25	14·00	9·20	2·15	82	3·25	12·13	8·93	1·72
8 weeks	78	3·06	12·88	9·57	2·15	98	3·38	14·75	9·44	1·82
9 weeks	86	4·78	14·63	10·20	2·04	90	3·63	12·69	9·85	1·61
10 weeks	63	3·94	13·81	10·19	2·26	71	5·38	12·75	10·20	1·56
11 weeks	63	5·44	16·44	11·15	2·09	83	5·31	13·63	10·52	1·65
12 weeks	72	6·00	17·06	11·30	2·12	71	4·50	15·69	10·96	1·83
13 weeks	118	6·31	17·63	11·91	2·13	124	4·69	15·38	11·45	1·77
4 months	167	7·19	19·44	13·37	1·97	157	4·00	19·00	12·43	2·02
5 months	165	8·75	20·75	14·32	2·07	165	7·69	20·00	13·44	1·96
6 months	155	7·81	21·63	15·13	2·19	161	8·13	21·38	14·31	2·00
7 months	145	9·13	22·31	15·82	2·13	148	8·50	21·75	14·85	1·96
8 months	135	12·31	22·06	16·03	2·06	138	9·50	22·75	15·54	1·94
9 months	128	12·38	21·88	16·77	2·02	123	11·13	22·50	15·89	1·86
10 months	114	12·63	22·38	17·41	2·16	117	11·69	23·00	16·65	1·90
11 months	113	14·00	23·06	17·81	2·04	100	10·31	24·38	16·80	1·85
12 months	110	12·69	23·63	18·01	2·06	96	11·31	26·31	17·05	1·93
15 months	112	14·19	23·44	18·93	2·03	91	13·19	23·00	18·15	1·79
18 months	94	12·50	25·13	20·10	2·34	77	14·50	23·94	19·41	2·05
21 months	79	14·19	27·63	21·23	2·28	59	15·63	24·81	20·65	2·12
24 months	63	15·19	29·13	22·56	2·68	54	16·38	25·38	21·77	1·96
27 months	47	17·19	31·00	23·92	3·04	37	18·75	26·88	23·26	2·05
30 months	37	20·50	31·75	24·99	2·60	33	19·75	28·06	24·51	2·13

[1] From thirteen months on, the number of observations in each month was equal to that in the adjoining months and the readings shown are not a mean of three months but for the month in question only. The other values are omitted for brevity.

[2] S.D., standard deviation.

the rates of increase in weight of New Guinea and English children. The slope of the curve is determined by the growth rate and the two curves are almost parallel from twelve months on. Before four months the curves approach each other, indicating the observed greater growth of New Guinea infants, and from four to twelve months they diverge gradually, indicating the lesser growth rate.

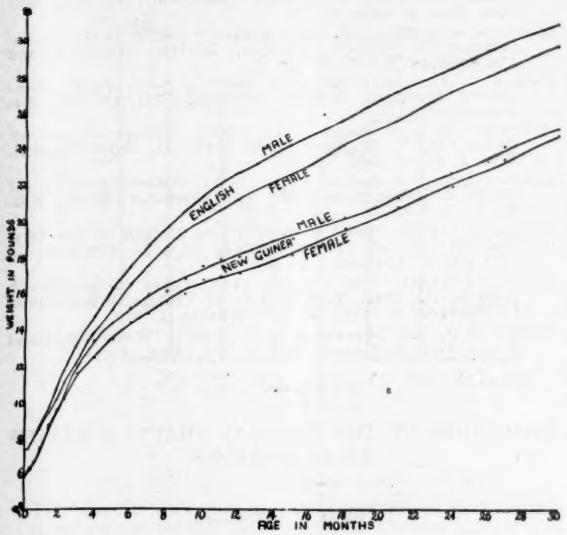

FIGURE II.

Graph comparing rate of increase of weight in New Guinea and English children, from birth to thirty months.

Table VI shows the increase in weight in proportion to the birth weight for the sexes combined, and compares it with similar figures for English children. The New Guinea child multiplies its birth weight more rapidly than the English child.

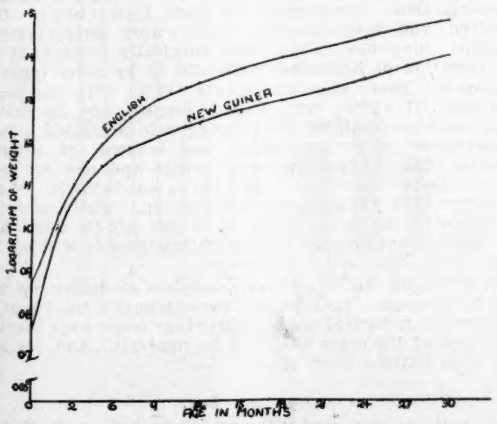

FIGURE III.

Semilogarithmic graph showing comparison of rate of increase in weight of New Guinea and English children.

The only comparable figures for New Guinea native children are those of Malcolm (1951). These reports, as summarized by Massal (1951), show the following facts. The babies weighed were from three areas—New Ireland, Trobriands and Rabaul. In the entire survey the number weighed for the determination of the mean in each month averaged 30, and when this total of observations is divided among the three individual areas there are not sufficient for the determination of means. The means obtained for the Trobriands and Rabaul follow the values of the present series until the ninth month; but after this they fall off by varying amounts in each month, being usually in the region of one pound less. The mean weights at one year of age were as follows: New Ireland, 16·38 pounds; Rabaul, 16·87 pounds; Trobriands, 16·44 pounds; these compare with a mean of 17·53 pounds in the present series.

One reason for the variation of these means from those of the current series is the authors' uncertainty as to the age of the babies weighed. It is stated in the text of Massal's article that the ages were accurate to within one month. It is apparent that more recently born children had their ages accurately estimated, while those aged over nine months had their ages over-estimated. Their survey was a cross-section based on one examination of different infants, while the present survey is a longitudinal study based on repeated examinations of the same infants.

The remarks of Massal and Malcolm concerning comparison with Australian weight increases must be reviewed in the light of the current series of observations. They observed a pronounced decrease in the growth rate after the age of nine months. The more accurate mean weights of the present study show that the growth rate does decline from four to twelve months when compared with the English increases, but the fall in rate is gradual and a steady growth is soon resumed.

TABLE VI.

Increase in Weight in Proportion to Birth Weight.

Increase in Weight.	New Guinea: Age (Months).	European: Age (Months).
Twice birth weight	3·0	4·5
Three times birth weight	12·0	13·0
Four times birth weight	27·0	29·0

Medical Discussion of the Growth Rate.

The higher weight gain from birth to three months must be due in part to the unregimented demand feeding practised in native communities as compared with the regulated feedings of civilized communities. Millis (1954), when studying weight increases in Chinese infants in Singapore, found that those who were entirely breast fed had better growth rates than others receiving complementary feedings. In the current series the majority were entirely breast fed; of 651 babies and infants, six were given complementary feedings with artificial milk on account of a deficient maternal supply, and six were entirely bottle fed on account of the death of their mothers in childbirth (except in one case).

From four to twelve months there is a proportionately lower increment in the native children; but after this period the increments are maintained at the English level. In all cases in which an actual decrease in month-to-month readings was observed, during the period from four to twelve months or any other period, there was a history of illness. This was usually designated on the records as "fever", indicating in most cases malaria; but a number of babies lost weight on account of nose, chest and bowel complaints. All these conditions appear to be more common during the period from six to twelve months while the child is developing his immunity.

Massal (1951) attributes the more pronounced decline in this period to the irregular and unsatisfactory weaning procedures used in New Guinea natives. No doubt this is partly responsible; but as the decrease first occurs before weaning is a major factor, illness is probably the major cause. When a loss occurred, it was usually recouped rapidly after control of the illness, which indicates that feeding was adequate.

Graduated Mean Weights and Standard Deviations.

The graduated mean weights and standard deviations have been calculated algebraically from the figures presented in Table V. These give a standard range of weights from birth to thirty months, and should be of assistance in determining whether normal development is occurring or otherwise. These values are set out in Table VII.

TABLE VII.

Graduated Mean Weights (Pounds) and Standard Deviations.

Central Age.	Boys.		Girls.	
	Mean Weight.	Standard Deviation.	Mean Weight.	Standard Deviation.
3 weeks	6·96	1·44	6·96	1·40
4 weeks	7·46	1·58	7·46	1·56
5 weeks	7·99	1·70	7·99	1·65
6 weeks	8·53	1·78	8·53	1·68
7 weeks	9·13	1·85	9·01	1·71
8 weeks	9·69	1·91	9·44	1·73
9 weeks	10·21	1·96	9·85	1·75
10 weeks	10·69	2·00	10·24	1·77
11 weeks	11·13	2·04	10·61	1·78
12 weeks	11·53	2·07	10·96	1·79
13 weeks	11·91	2·10	11·30	1·80
4 months ..	13·30	2·16	12·40	1·84
5 months ..	14·28	2·22	13·40	1·87
6 months ..	15·11	2·27	14·26	1·90
7 months ..	15·82	2·32	14·99	1·93
8 months ..	16·43	2·37	15·60	1·96
9 months ..	16·94	2·42	16·11	1·98
10 months ..	17·37	2·47	16·53	2·00
11 months ..	17·72	2·52	16·88	2·02
12 months ..	18·02	2·56	17·19	2·04
1 year 3 months	18·95	2·68	18·12	2·10
1 year 6 months	20·08	2·80	19·31	2·16
1 year 9 months	21·31	2·89	20·61	2·21
2 years	22·59	2·98	21·93	2·24
2 years 3 months	23·91	3·04	23·25	2·27
2 years 6 months	25·23	3·10	24·57	2·30

Summary and Conclusion.

1. The mean birth weight of the New Guinea native child ranges from 5·84 to 6·64 pounds in the two areas observed.

2. Improvement in maternal diets would result in an increase in birth weights.

3. When the international standard of prematurity is used, 30·05% of births in one area are premature, but the survival rates are far better than those of European babies of the same weight, and babies weighing over 4·50 pounds show little evidence of prematurity. Accordingly, only those New Guinea infants weighing under 4·50 pounds at birth are premature, but on account of the already high infant mortality rate from other causes, all babies weighing under five pounds should be nursed as premature.

4. On account of the native practice of unregimented demand feeding, the growth rate from birth to three months of the New Guinea native child is better than that of the English child. From four to twelve months the rate of increase is less in New Guinea children on account of the influence of disease. From twelve to thirty months the rate of growth of the native child parallels that of the European child.

5. The proportionate weight increases through infancy are better than in Europeans; the birth weight is doubled in three months and trebled in twelve months.

6. Graduated mean weights and standard deviations are presented as a guide to the normal development of New Guinea native children.

Acknowledgements.

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FRACTURES OF THE FEMORAL SHAFT: A REVIEW OF 242 PATIENTS.

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Brisbane.

THERE is still no uniformity of opinion on the correct treatment of fracture of the femoral shaft, and it is difficult to find a recent authoritative account of the results of treatment in an unselected series of adult patients. For these reasons this review has been undertaken.

Two hundred and forty-two patients with fracture of the femoral shaft were admitted to the Brisbane General Hospital orthopædic department between July, 1949, and January, 1953. Twenty-four of them died (10%). One hundred and seventy-seven (74%) were conservatively treated. Sixty-five (26%) were surgically treated, 31 by the insertion of Kuntscher nails and 34 by other types of operation. There were 27 patients (11%) with compound fractures, 31 (12%) with Paget's disease, and 53 (25%) with injuries resulting from motor-cycle accidents. Four amputations were performed, two because of arterial injuries, one for post-operative sepsis and one for non-union. In two cases the sciatic nerve was injured. Of the survivors, 173 (81%) were followed up. There were 58 fractures in the upper third, 85 in the middle third, and 65 in the lower third. The patients were followed up for from one to four and a half years.

In 130 cases the notes were complete or follow up was still in progress. In 112 cases *questionnaires* were sent to supplement in-patient notes. Forty-four cases were thereby lost, so that 198 cases were left for analysis. Age, sex and site distributions were even.

Age and Sex.

No patients were under the age of twelve years. Figure I shows the age distribution. The two high peaks are of interest; the first is due to violent road accidents mostly with motor-bicycles, and to a lesser extent industrial accidents; the second results from the remarkable increase in the accident liability of the aging female. Figure II shows the sex incidence with age. Of the 223 known ages, 161 were of males and 62 of females. Compare the steady decline in male age incidence with the sharp rise in the female incidence at fifty years. Why should this be so? The only factor common to the female at this age is the menopause. Is this a major causative factor?

Deaths.

Twenty-four patients (one in 10 of those admitted) died in hospital. Table I shows the cause of death and the time after the patient's admission to hospital at which it occurred. The mortality actually attributable to the fracture has been difficult to assess. Many of the multiple-injury deaths were due to head injuries. Fat embolism, pulmonary embolism, pneumonia and uræmia must be attributed to the fracture either directly or indirectly. The true mortality in this series therefore lies somewhere between 4% and 7%.

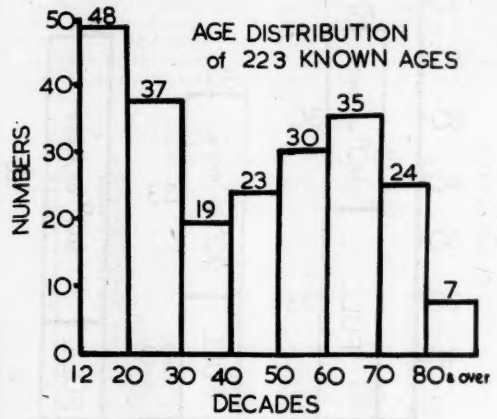

FIGURE I.
The age distribution.

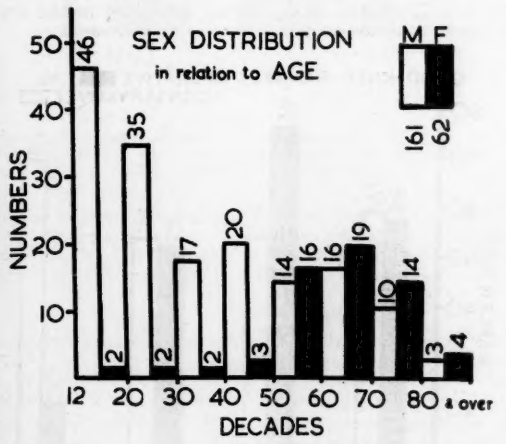

FIGURE II.
The sex distribution in relation to age.

Treatment.

Conservative Treatment.

The majority of patients were treated primarily by balanced sliding traction, usually skeletal, in a Thomas splint with a Pearson's knee piece. A small number of patients with fractures of the lower third were treated by fixed traction, and a few others by immediate application of a plaster spica. In the surviving patients so treated traction was maintained for one to four months, averaging two and three-quarter months over the series. In younger patients, once the fracture had become sufficiently firm, a long plaster spica was applied and left *in situ* until union was sufficiently good to allow non-weight-bearing knee exercises. Older patients were allowed to lie in their Thomas splints without traction until this stage was reached. In a small number of cases walking calipers were used instead of the spica or Thomas splints. The average total time of continuous immobilization was four and a half months, with a range of one to nine months. These times do not include time spent in walking calipers. These were used occasionally to allow weight-bearing while consolidation was proceeding. During treatment, quadriceps drill was taught and practised as a routine.

TABLE I.
Analysis of 24 Deaths in Hospital.

Period.	Cause of Death.	Number of Deaths.
Within seven days ..	Shock and multiple injuries	6
	Bronchopneumonia ..	2 } 9
	Fat embolism	1
Within one month ..	Carcinomatosis	1
	Uræmia	1 } 4
	Pulmonary embolus ..	1
	Unknown	1
Within three months ..	Pneumonia	2
	Carcinomatosis ..	2
	Coronary occlusion ..	1 } 7
	Uræmia	1
	Cerebral hæmorrhage ..	1
After one year	.. ..	4

Compound Fractures.

There were 27 compound fractures—an overall incidence of 12%. These were treated on conventional lines aiming at primary skin closure when possible. Three became infected. Primary internal fixation was used in one case only. The other fractures were treated as closed fractures after wound treatment.

Operative Treatment.

Sixty-five patients were treated operatively (one had bilateral fractures). The indications for operation, and the distribution and variety of treatment used in relation to site are shown in Table II. These operations were performed in two main periods, one before and the other after the introduction of Kuntscher nails into the Brisbane Hospital armamentarium. Thirty-two insertions of Kuntscher nails and 34 other operations have been performed. These others are as follows: 10 bone grafts without internal fixation, five bone grafts with plate fixation, one plating without bone graft, six insertions of Capener blade-nails, five screw fixations, two drillings of bone ends, one osteotomy (subtrochanteric), and one "failed" insertion of a blade-nail in a case of Paget's disease. All patients in whom failure to reduce the fracture was the indication underwent operation within one month from the time of injury.

TABLE II.
Indications for Operation, Site of Fracture and Type of Operation.

Site of Fracture and Type of Procedure.	Indications for Operation.		
	Failure to Reduce Fracture.	Delayed Union.	Non-Union.
Upper third :			
Kuntscher nail insertions ..	11	0	0
Other procedures	13	1	0
Middle third :			
Kuntscher nail insertions ..	10	6	2
Other procedures	0	14	0
Lower third :			
Kuntscher nail insertions ..	2	1	0
Other procedures	3	2	0

Post-operatively the patients who had had Kuntscher nails inserted were nursed in a Thomas splint for two to three weeks. Thereafter 10 were placed in long plaster spicas, four because of coincidental tibial fractures, and six because the fit of the nail was considered to be insufficiently firm for rotatory strains. The time of immobilization varied from six weeks to six months. In the other cases knee movements were started as soon as the post-operative reaction had settled, and weight-bearing was allowed when union was advancing well. Of the 29 patients followed up, in one non-union of the fracture and in another delayed union occurred. Both of these had been treated in plaster spicas post-operatively.

TABLE III.

Final Knee Function.

Site of Fracture: Type of Treatment.	Range of Knee Function.				Survivors Found at Follow-Up.
	Full Range.	90° or More.	80° to 40°.	40° or Less.	
Lower third:					
Kuntscher nail insertions	0	1	0	1	2 of 3
Other operations ..	0	0	0	3	3 of 5
Conservative treatment	7	20	5	7	39 of 50
Middle third:					
Kuntscher nail insertions	3	8	0	5	16 of 18
Other operations ..	0	3	1	7	11 of 14
Conservative treatment	12	14	7	15	48 of 63
Upper third:					
Kuntscher nail insertions	6	4	0	1	11 of 11
Other operations ..	2	4	2	2	10 of 14
Conservative treatment	8	5	0	11	24 of 40
Total	38	59	15	52	164 of 218

Overall Results.

Union was achieved in all but two cases. One of these patients was an elderly woman with Paget's disease; her leg was amputated. The other was a middle-aged man who had had a Kuntscher nail inserted; he died of a coronary occlusion after a bone graft. The results were gauged by knee function. If a range of 90° or better from full extension was obtained, the result was classed as good.

TABLE IV.

Overall Results (Knee Function).

Knee Range.	Percentage of Patients.	Result.
Full	23	59% Good
90° or more	36	
80° to 40°	9	41% Poor
40° or less	32	

Less than 90° of flexion was classed as poor. One hundred and seventy-three patients were available for analysis, less four amputees and five who had been hopelessly bed-ridden before they sustained their fracture. Of the 164 patients remaining (Table III) only 59% had good knees (Table IV). An analysis was undertaken in an attempt to determine the factors producing these results.

Analysis of Good Results.

The good results were examined in relation to site and treatment given. The age and sex distributions in relation to site and treatment given were even, with one exception. Operations for fractures in the middle third of the femur, irrespective of variety, were all performed on young patients, aged under thirty years.

Site.—Figure III shows the percentage of good results in relation to site irrespective of method of treatment. There was not a great deal of difference between the results in the upper and lower thirds, while in the middle third

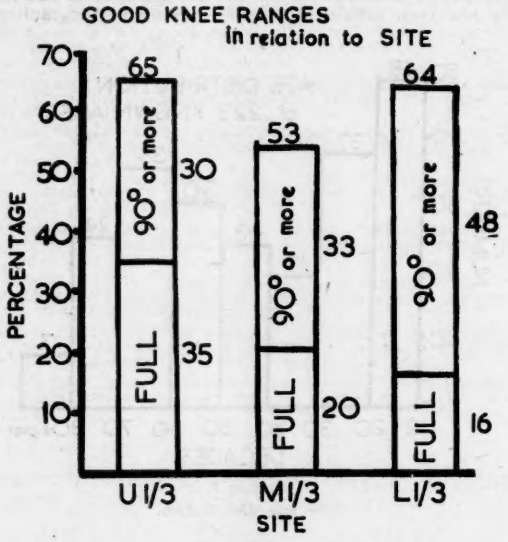

FIGURE III.

The percentage of good knee ranges in relation to site of fracture, irrespective of treatment given.

results were somewhat inferior. However, the percentage of knees with full function decreased the further down the shaft one proceeded, although the difference in the lower two-thirds was not great.

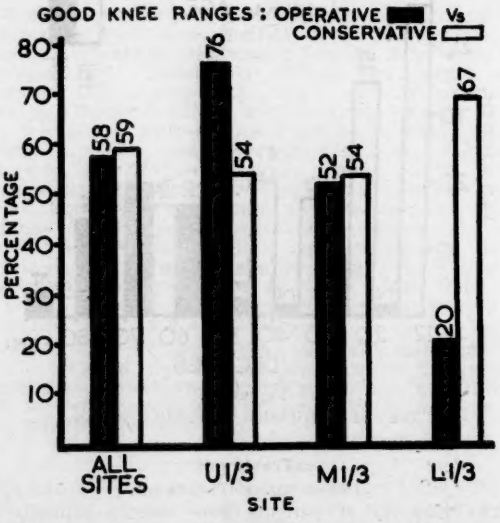

FIGURE IV.

The percentage of good knee ranges in relation to site—operative versus conservative treatment.

Treatment.—If these results are separated according to whether operative or conservative treatment was given (Figure IV), it becomes apparent that the expectation of a good result is seriously influenced by the site of the fracture in relation to the treatment used. It would appear

that a patient with an upper-third fracture has a better chance if treated operatively, that in a case of a middle-third fracture operation makes little difference, and that in the treatment of a lower-third fracture operation should be avoided if possible. Thus with operative treatment, the lower the fracture the worse the result.

A further dissection of the treatment was undertaken by separating the insertion of Kuntscher nails from other operative methods (Figure V). It became apparent that Kuntscher nails produced by far the best operative results in all sections of the femur, and were much superior to all other methods in the treatment of fractures of the middle and upper thirds. It must be noted that the number of

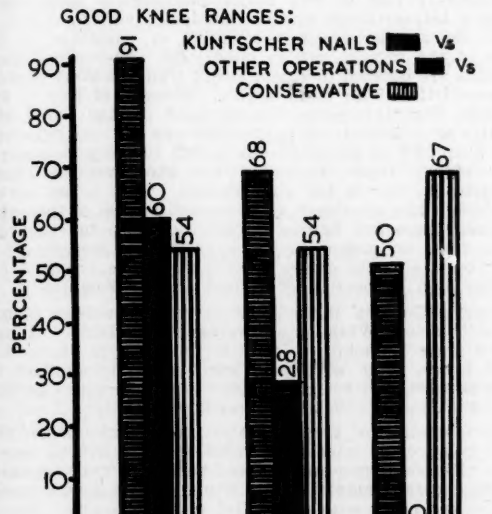

FIGURE V.

The percentage of good knee ranges in relation to site—Kuntscher nail insertions versus other operations versus conservative treatment.

fractures in the lower third so treated was very small and of doubtful significance. However, the only successful result followed the insertion of a Kuntscher nail, in spite of the fact that this site is relatively unsuitable.

Analysis of Poor Results.

Sixty-eight cases in which the results were poor were available for analysis. Preexisting disease, age and sex, time of immobilization, refracture, compounding of the fracture and gross comminution were investigated.

Preexisting Disease.—Preexisting disease produced a poor result in 16 cases. There were nine grossly osteo-arthritic knees (seven of the patients had gross Paget's disease), one old tubercular knee, one arthrodesed knee, one case of *fragilitas ossium*, and one case of Paget's disease in which a caliper was required for protection several years after fracture union. Two grossly obese patients (one weighing 24 stone) did poorly. The remaining patient was a hemiplegic.

Age and Sex.—The sex distribution of poor results was comparable to that of the whole series (Figure VI). The percentages of poor results in each decade showed no significant difference, except for a high rise in the sixth decade explainable only by chance.

Time of Immobilization.—If patients operated on and patients with injury or preexisting disease involving the knee were excluded, there were only 42 good result cases and 38 poor result cases left for comparison (Figure VII). The graph in Figure VII reveals that on an average the patients who had poor results were immobilized a little longer than the others.

Refracture.—By refracture is meant the fracture of callus that occurs during treatment as a result of poor judgement of the strength of union; in other words, the splints have

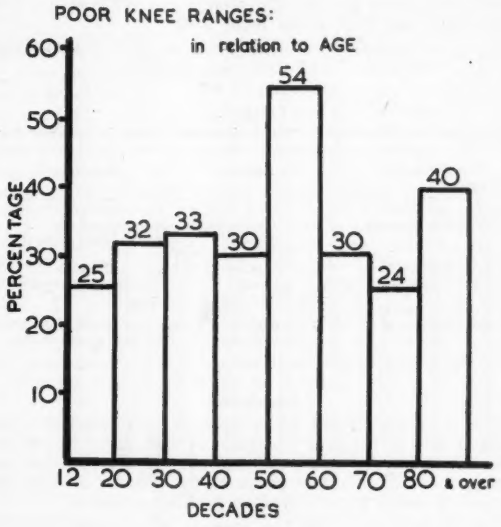

FIGURE VI.

Percentages of poor knee ranges in relation to age.

been prematurely removed. This is often associated with delayed union. There were eight patients in the series. In six the results were poor. One patient only was treated from beginning to end.

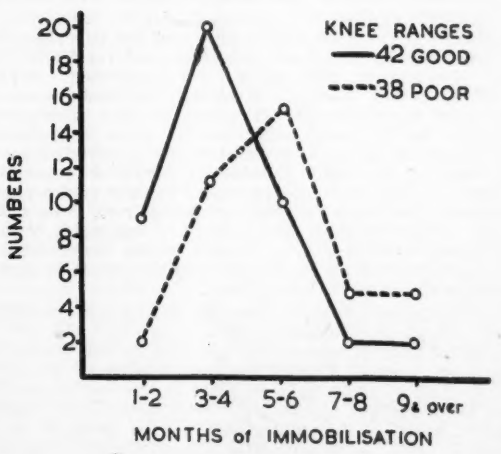

FIGURE VII.

A comparison between the immobilization times when functionally good and poor knees resulted after uncomplicated fractures.

Coincidental Injury in the Same Limb.—There were 25 patients who had coincidental injuries in the same limb (Table V). Of the 19 remaining for analysis, eight had good results and 11 had poor results. But of the seven patients with direct joint involvement five did poorly. The two good results were obtained in a case of a penetrating knee wound and in a case of undisplaced patellar fracture.

Half of the patients with coincidental fracture of the tibia had poor results.

Compounding of the Fracture.—Of the 27 patients in the series with compound fractures, two died of other injuries, four were lost in the follow-up and two had amputations for vascular injury. Of the 19 remaining, nine had poor results. Included among these are two patients with gross sepsis (the other patient did well), two with actual joint injury and one with gross bone loss.

Comminution.—Twenty-nine patients had grossly comminuted fractures; 12 of these did poorly.

TABLE V.

Knee Function after Fractures with Coincidental Injury in the Same Leg.

Injuries.	Results.	Comment.
Involving the knee:		
3 fractured patellæ ..	1 good.	Undisplaced patella.
	2 poor.	Compound lower third femoral fractures.
3 condylar fractures ..	3 poor.	1 femoral, 2 tibial.
1 penetrating knee injury	Good.	Femoral fracture (compound).
Not involving the knee:		
12 fractured tibiæ	6 good.	3 of 4 insertions of Kuntscher nails gave good results.
	6 poor.	

Comment.

This is an unselected series of patients treated at a base hospital which receives the majority of the difficult fracture cases in the south-east corner of Queensland, and many others from other parts of the State. A high proportion of cases were therefore problem cases.

Also of importance is the absence of children from the series. Only 11 patients were aged between twelve and sixteen years, whereas at least 66 patients were aged over sixty years.

The follow-up time in a number of the cases is inadequate for final assessment. It is very likely that some of the results classified as poor will in time be good. However, it is believed that the figures as presented indicate accurately the trend that treatment should take.

The results obtained should be considered with the foregoing points in mind.

Analysis of the good results produced few surprises; but the comparatively high percentage of good results in fractures of the lower third was a little unexpected. It must be stressed that fractures involving the condyles or the knee joint were excluded. It is probable that these results were due to the comparative ease of closed reduction in most cases, to the ease of maintenance by external splinting, and to the small number of operative procedures necessary. This is indeed fortunate in view of the almost uniformly poor knee function resulting from these operations. It is concluded that if there is reasonable hope of firm union occurring in a fracture of the lower third of the femur within the first year after injury, it is best to persist with conservative methods.

The comparison between insertion of Kuntscher nails and other operative methods shows that the use of the Kuntscher nail, if technically possible, is the method of choice for internal fixation in shaft fractures. Since the introduction of these nails no plate and screw fixation has been used, because of the high complication rate (mostly delayed union or non-union even in the presence of an adequate graft) associated with this appliance. This does not include the blade-plate used for subtrochanteric fractures that are too high for the Kuntscher nail. Not only has it been found that the union is more certain with Kuntscher nails, but, as can be seen, the functional results have been much better. This applies to fractures in both the middle and upper thirds, the upper third being an especially propitious site.

In spite of the superiority of the results from Kuntscher nail insertion over all others in these sites, wholesale open reductions are not recommended. It is believed that this procedure should be reserved for cases in which conservative methods fail, because of the good results that can be obtained by conservative methods, and because operations still carry additional though infrequent risks.

In fractures of the upper third, however, the operative results are uniformly good enough to demand that the conditions for the continuance of conservative treatment should be almost ideal, or that the risks of operation should be prohibitive.

It is worth noting that the incision used, for the most part anterior or postero-lateral, did not seem to influence the result in fractures in the upper two-thirds. In the lower third the use of the anterior incision makes stiffness of the knee nearly a certainty.

The poor results following femoral shaft fracture are undoubtedly due to two major pathological processes—namely, intraarticular and extraarticular adhesions due to joint abnormality either preexisting or sustained at the time of the injury, and to quadriceps adherence. Some patients are doomed to a poor result from the start because of preexisting joint abnormality. Because of this it was thought that the percentage of poor results would rise greatly with increasing age. This was not so. The rise was from 25% in the late teens to 40% in the patients aged over eighty years, excluding the above-mentioned and inexplicable rise in the sixth decade. This is not a very significant rise considering the overall flatness of the graph between these two figures. With regard to function, age alone is of no prognostic value. The high percentage of poor results in the under twenty years age group is due to the high proportion of violent trauma sustained.

Long periods of immobilization have also been blamed for stiff knees. While on an average the patients with poor knees were immobilized a little longer than those with good knees, some with good knees were immobilized for long periods, and some with poor knees for short periods. As with age, so with immobilization times.

Compounding of fractures and gross comminution both gave poor result rates comparable with the overall rate of 41%. Severe damage to skin and bone does not necessarily imply severe damage to muscle, and a very severe muscle injury can occur with a so-called simple fracture. What a misnomer this may be functionally!

Thus advanced age, long periods of immobilization, compounding of fractures and gross comminution by themselves do not imply a greater likelihood of poor function. However, it has been noted in this series that in the absence of other factors, poor results do occur if two or more of the above-mentioned factors are present at once. On the other hand, the figures suggest that refracture and coincidental knee injury are alone prognostically highly significant. Refracture inflicts two fracture hæmatomata and a prolonged period of immobilization on the patient, and often a bone graft as well. Three of the six patients with poor results following refracture had bone grafts without internal fixation. The two who had good results were treated by bone grafting and Kuntscher nail fixation. These nails remove the necessity for prolonged immobilization, which in these circumstances is important.

Thus refracture, coincidental injury and preexisting abnormality in the knee, and treatment in relation to site (especially operations on the lower third of the femur) are of great significance in regard to ultimate function if considered alone, while two or more of the following factors must be present before there is an increased likelihood of a poor result: advanced age, long immobilization, compounding of fractures and gross comminution.

It is believed that this series has proved the value of the Kuntscher nail and suggested the indications for its use. It is anticipated that it will ensure in the future a greater number of good knees in patients who require operation.

Summary.

1. A review of 242 unselected cases of fractures of the femoral shaft is presented.

2. The follow-up period was from one to four and a half years in 198 cases.

3. The ages of the patients ranged from twelve to over eighty years, a large proportion being in the older groups.

4. The incidence in the female rose sharply after the age of fifty years.

5. Twenty-four patients died in hospital. The mortality attributable to the fracture was estimated at between 4% and 7%. The causes of death are shown.

6. One hundred and fifty-two of the survivors were treated by sliding skeletal traction in Thomas splints. Traction was maintained for one to four months, averaging two and three-quarter months. The period of total immobilization ranged from one to nine months, averaging four and a half months.

7. Twenty-seven fractures were compound. In three of the 25 survivors infection occurred.

8. Sixty-five patients were operatively treated, 32 by the insertion of Kuntscher nails.

9. The results were gauged by knee function; 59% of all patients followed up had good results.

10. The expectation of a full range of movement became less the lower the fracture occurred.

11. The type of treatment in relation to site greatly influenced the result, Kuntscher nail insertion producing the best results in the upper and middle thirds of the femur, and conservative treatment the best results in the lower third.

12. Preexisting abnormality and coincidental injury in the knee, refracture and operations in the lower third of the femur produced a high incidence of poor results.

13. Advanced age, long immobilization, compounding of the fracture and comminution, each being present alone, did not produce a significantly different proportion of poor results from the average for the series.

Acknowledgements.

I wish to thank Dr. A. D. D. Pye for his permission to use the hospital records, and Dr. T. V. Stubbs Brown for his advice.

SUGGESTIONS FOR THE TREATMENT OF SCHIZOPHRENIC AND MANIC-DEPRESSIVE PATIENTS.

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CONTINUOUS NARCOSIS with "Somnifen" was introduced by Kläsi in 1922, a few years after Wagner-Jauregg had started malaria treatment of general paralysis. A successful therapeutic approach to schizophrenia and manic-depressive insanity appeared to be possible, to supplement Wagner-Jauregg's discovery. Indeed, continuous narcosis —with "Somnifen" and other drugs—has maintained a place in the therapy of mental diseases. But it was essential to look for other drugs and other methods of treatment, in order to achieve more comprehensive results. Finally insulin coma, shock methods, and leucotomy and related surgical procedures proved to be more satisfactory. Yet the number of patients who benefit from them just temporarily or even not at all is still large, and new attempts have to be made. So other drugs, among them newly discovered ones, were tried on mental patients, but rarely with success. Important trials with lithium salts were made by Cade (1949). The second part of this paper will deal with lithium salts in psychiatric treatment.

Sodium Salicylate Combined with Narcotics.

Among the numerous therapeutic suggestions during the period from 1922 to 1938, when insulin coma treatment came into general use, salicylate played a humble part, but was still mentioned by Meerlo (1933). Weichbrodt, in 1926, had furnished some theoretical foundations which are obsolete now, and Weeber (1924) tried "Atophanyl", with hardly convincing results. My own experiences (Margulies, 1927, 1931) were not encouraging at first, but later a surprising fact became obvious: among many failures a few patients showed considerable and lasting improvement. They had, apart from salicylate, received a course of continuous narcosis, quite incidentally and at different times. There were chronically affected persons among them, apparently beyond hope of recovery or substantial improvement, and it was worthwhile to continue with trials even after the coma and shock methods had become firmly established. Three young female patients, previously treated unsuccessfully with insulin and electric shock, received "Atophanyl" injections for three days, and after an interval of two weeks a course of electroconvulsive therapy, which was repeated several times. Two of them progressed satisfactorily and were finally discharged from hospital. They remained well for many years, and one of them became self-supporting.

Various salicylates were tried; soon it was obvious that Weichbrodt's original scheme was not practicable (the intravenous injection of 20% sodium salicylate solution, 20 cubic centimetres on five consecutive days). It was dangerous and had to be abandoned. "Atophanyl", in ampoules for intravenous and intramuscular injection, was unobjectionable even in the large doses required. It was useful and yielded a few good results in connexion with electroconvulsive therapy, as has been mentioned. A different series of trials started in 1948. Sodium salicylate was combined with narcotics and given orally in massive doses. It was advantageous to inject paraldehyde sometimes; in the last trials "Somnifen" injections were used in moderate quantities if a second course was required. The following mixtures were prescribed: (i) sodium salicylate 40 grains, sodium bromide 40 grains, sodium citrate 30 grains, tincture of capsicum 8 minims, sodium bicarbonate 5 grains, water to one ounce; (ii) (*a*), in the first course, chloral hydrate, 20 to 40 grains, paraldehyde 5 cubic centimetres; (*b*), in the second course, "Somnifen" and paraldehyde.

Time-tables for the administration of mixture (i) and the narcotics are given to the charge nurses. One ounce of mixture (i) is given three times on four days of the week and four times on the remaining days. Orders for the narcotics are left to the medical officer's discretion. It is desirable to have an interval of four hours between the doses of mixture (i) in order to avoid considerable rises of temperature and/or vomiting. Between the administration of mixture (i) and that of chloral hydrate there should be an interval of two hours. No treatment should be given during the night except in emergency. Generally the medicines should be taken before meals if their times coincide with them. The patient should be fed well and have a drink with glucose from time to time. Slight deviations from the time-table are permitted, and, as soon as the members of the nursing staff have gained some experience, vomiting can mostly be avoided. Rises of temperature are not infrequent; no special measures are required unless the temperature exceeds 100° F. Usually the temperature becomes normal spontaneously the next morning. A course of treatment lasts seven days and must not be interrupted.

The ordinary symptoms after the administration of sodium salicylate are well known: an immediate fall of temperature in febrile diseases, heavy perspiration and an increased pulse rate. Large quantities cause objectionable symptoms—headache, tinnitus, confusion, indistinctness of vision, excessive sweating, skin eruptions, and conditions of collapse with subnormal temperatures, weak pulse and unconsciousness. The quantities as suggested are very large indeed—eight to 11 grammes daily—but do not exceed those which are given sometimes to patients with rheumatic fever. Dangerous complications have not so far occurred in the trials; very rarely the temperature fell below normal, and even profuse sweating was often avoided, in spite of the addition of tincture of capsicum. Sodium salicylate does not easily provoke toxic symptoms as is the case with aspirin; but mental symptoms of intoxication (confusion, restlessness, visions, nausea) were rarely avoided, and they are probably not undesirable in the treatment of mental patients as long as they are kept under control.

Salicylate, indispensable in general therapy and in the treatment of rheumatic disorders, has received much attention by research workers. Some important points may be recalled, mainly from a recent paper by Bach *et alii* (1952).

Salicylate affects metabolism and sedimentation rate and gives rise to an increase in the plasma volume with the danger of œdema. The warning has always been given to be cautious with salicylate in the presence of renal failure. There is a tendency to hypoprothrombinæmia, leading occasionally to severe hæmorrhages.

I suggest calling this treatment "modified continuous narcosis". It has been started in England (Middlewood Hospital, Wadsley, near Sheffield). Of 21 treated patients (nine males and 12 females), five were discharged from hospital and four were greatly improved, although three of them had to stay in the hospital because of unfavourable home conditions. Another, soon after the conclusion of treatment, changed from an absent-minded, hallucinated and disorientated man into an efficient garden worker with remarkable initiative, but appeared not to be fit for an existence outside the hospital because schizoid character traits made it advisable to give him a sheltered life. There were nine cases of less than three years' duration; three of the patients remained refractory—two mental defectives with schizoid characteristics, and one male schizophrenic with paraphrenic symptoms who rapidly became demented. Of the five discharged patients, one male (with schizophrenia and fairly low-grade mental deficiency) returned to the hospital after five months because he became violent at home, but kept up a relative improvement and was much more approachable and cooperative than ever before. A female came back after two years, but recovered soon after a few electric shock treatments.

The most startling recovery took place in a female schizophrenic of nine years' standing; she had been treated several times by many methods and had not benefited at all from leucotomy. She was permanently relieved after two courses of modified continuous narcosis. First she had difficulties at home, but things could be smoothed out without her readmission to hospital, and finally she was able to settle down and become self-supporting. Her behaviour and conversation were correct and rational. Tensions at home occurred from time to time, but were of minor importance.

A survey of the Middlewood cases is attached (Table I).

Trials at Lachlan Park Hospital were started in December, 1951, and 15 patients, all but one being females, received the treatment. Generally cases of not too long duration were selected. All the patients had previously been treated with insulin and electroconvulsive therapy, without lasting result. Four were discharged from hospital, three more, apparently fit for a trial at home, returned to the hospital. One of them, just slightly improved, was from former experience expected to progress in favourable home conditions, but it was a mistake and she had to be brought back after six weeks. The readmission of the two others was due to unfortunate domestic and marital conditions, but their lasting improvement was evident in the hospital *milieu*. Another married woman may be able to be discharged some day. She was beset with obsessional features which are slowly receding. She was no longer violent, after the conclusion of two courses of modified continuous narcosis, but was still much embarrassed. Another female with very disagreeable symptoms was certainly more amenable, but not fit to leave the hospital; leucotomy has been performed on her. The number of substantially improved patients is eight out of 15.

It is an important feature of modified continuous narcosis that a favourable response requires plenty of time to develop. Occasionally it happens that a patient improves very soon, but this is rare, and early improvement is generally temporary. Often the mental state after the termination of a course of treatment becomes worse and remains so for many weeks or even months, and a strict warning should be given that no immediate and dramatic results are to be expected. Usually there is a period which calls for much patience from doctor and nursing staff and from the relatives as well. From the experience acquired so far, the average duration of such transitional periods is about four months until the first signs emerge which, sometimes on a very optimistic view, may be taken as the indications of a success.

The following case illustrates the immediate and later results of modified continuous narcosis, which led to strengthening of stability and self-control after a period of apparent deterioration.

TABLE I.

Survey of Middlewood Cases.[1]

Sex.	Age. (Years.)	Date of Admission to Hospital.	Diagnosis.	Previous Treatment.	Date of Commencement of Modified Continuous Narcosis.	Subsequent Treatment.	Result.	Remarks.
M.	22	3. 6.47	Schizophrenia (catatonic).	None.	18. 4.48 18. 5.48	None.	Recovery; discharged.	——
M.	38	8. 4.41 25. 3.46	Schizophrenia (simple).	None.	25. 4.49	None.	Greatly improved.	Discharge not advisable; odd character.
M.	32	5. 1.48 12. 1.49	Mental defect; schizoid.	None.	25. 4.49	None.	Greatly improved; discharged.	Readmitted, improvement confirmed.
M.	32	4. 3.43	Schizophrenia (catatonic).	None.	2. 8.49 17.10.49	Electroconvulsive therapy.	Greatly improved.	Discharge not practicable, bad home conditions.
F.	38	22. 8.46	Acute melancholia (schizoid).	Electroconvulsive therapy.	17. 4.48	None.	Recovery; discharged.	1951 readmitted, quickly recovered with electroconvulsive therapy.
F.	29	20. 3.39	Schizophrenia (simple).	Electroconvulsive therapy. "Somnifen", leucotomy.	18. 5.48 5. 7.48	None.	Recovery; discharged.	——
F.	44	8.10.47	Recent mania.	Electroconvulsive therapy.	12. 7.48	Electroconvulsive therapy.	Recovery; discharged.	——
F.	47	17.10.47	Acute mania.	Electroconvulsive therapy.	14. 8.48	Electroconvulsive therapy.	Greatly improved.	Discharge not practicable; no home.
F.	32	1. 1.46 7. 7.47	Paraphrenia.	Electroconvulsive therapy.	14. 2.49	Electroconvulsive therapy.	Greatly improved.	Discharge not practicable; bad home life.
F.	23	9. 3.35	Schizophrenia (catatonic).	"Cardiazol", electroconvulsive therapy.	24. 5.48 7. 3.49 14. 3.49	None.	Slightly improved.	Lasting improvement.
F.	25	15. 5.38	Schizophrenia (hebephrenic).	None.	24. 5.49	None.	Slightly improved.	Lasting improvement.

[1] No improvement, five male and five female subjects.

A psychosis developed in a married woman, aged thirty-four years. It started with forgetfulness and absent-mindedness. She was sleepless and became gradually worse. Finally she accused herself of imaginary crimes, but on certain occasions she was elated and danced in front of her house. Insulin and electroconvulsive therapy brought a little relief for short periods only, and two trials of home leave had to be broken off after five months and four weeks respectively. She suffered from fantastic delusions, and imagined that relatives of hers had been tortured and murdered. She heard voices and became aggressive and violent. Later olfactory hallucinations emerged. While at home on leave she took many drugs and abused people. Once she tore wet washing from the line in neighbouring houses. In the hospital she was spiteful and violent and had to be put into a ward for refractory patients.

From November 26 to December 2, 1951, she was given a course of modified continuous narcosis. She resisted paraldehyde injections and became agitated and aggressive on such occasions. She told of hearing voices and smelling a dead body. After the conclusion of the course no improvement occurred at first; she gave evidence of gross disorientation, mistook idiots for relatives and hugged them and was at times sullen and stuporose or quarrelsome. However, approximately two months after the course, brighter periods appeared. Visiting friends who had known her in her ill-health were surprised by her rational conversation and behaviour. But usually she remained sullen, tense and suspicious and was occasionally aggressive. Shortly before her affectionate husband appeared (who stayed for a week near the hospital), she violently attacked patients and nurses, imagining that they put needles into her body. But the husband could easily manage her, and took her out from morning until late afternoon. A new home trial was arranged, and she remained at home for eighteen months. According to the husband's reports, she was often "wonderfully well", but occasionally doubtful, talking to herself and laughing without reason. However, there were no serious symptoms until one day, after she had been home for six months, she disappeared suddenly and was found 11 miles from home, having wandered aimlessly through thick bush country. Things were able to be settled this time, since she remained quiet and cooperative. She did her housework very well and had much pleasure in gardening. For a year all went well, but when she ran away again she was readmitted to Lachlan Park Hospital. Here she was better than ever before and took part intelligently in housework and needlework and in the entertainments as well. She was treated with lithium citrate and barbitone, and was able to be discharged from hospital after two months.

Apart from the eight patients who were discharged from hospital or showed evidence of substantial improvement, four more were slightly relieved. They were less excitable, displayed interest in housework and needlework which had been lacking before the treatment, and attempted to adapt themselves to the environment. Among them is the only male patient. The remaining three females failed to show any signs of improvement.

Combined Lithium Medication.

The treatment of suitable patients with lithium salts (lithium citrate or carbonate) has evidently become a routine procedure in several Australian mental hospitals since Cade's paper was published in 1949. In the course of experiments on guinea-pigs he found sedative properties in lithium which suggested trials on patients with maniacal excitement. The results were encouraging. Noack and Trautner (1951) state that initial discomfort is noticed sometimes, while often there are no unfavourable side effects at all. Toxic effects, mentioned already by Cade, do not appear before the third or fourth day after administration. They are: gastric disturbances, nausea, vomiting and diarrhœa; motor disturbances, ataxia, slurred speech; blurred vision, giddiness; circulatory collapse. A warning is given not to restrict the salt intake or to alter the diet. Laboratory tests of lithium are concerned with urinary excretion and plasma content; retention of lithium appears to occur in connexion with maniacal periods, and the excretion may increase as soon as the mania begins to abate. But if toxic symptoms are evident, excessive retention and high plasma volumes are danger signals. A case which ended fatally, reported by Roberts in 1950, has received due attention; it stressed the necessity of careful medical supervision, but should not, as Ashburner (1950) points out, discourage further trials.

At the Lachlan Park Hospital, trials were started some years ago, but it was the rule to give only small doses and avoid toxic complications. Lithium citrate is used twice or three times daily (the original dose was 20 grains, but was reduced at Lachlan Park Hospital to 10 grains). Even so, the results were often satisfactory; maniacal patients were very soon quietened and became in due time reasonably cooperative without wanting other sedatives, and some chronically ill patients could be restrained by a maintenance dose. The combination of lithium citrate with narcotics was expected to extend the range of the treatment to schizophrenics and other psychotics. Lithium citrate was given with barbitone, since a slowly working drug with effects lasting a long time seemed appropriate. The patient received a drug three times daily, as follows: on the first day lithium twice and barbitone once; on the second day lithium once and barbitone twice; on the third day barbitone three times and no lithium; afterwards increasing doses of lithium and decreasing doses of barbitone, so that on the sixth day only lithium was given; no medicine on the seventh day. The dosage of barbitone was five grains in daytime and 10 grains at night. The treatment was continued for six to eight weeks; it may be called combined lithium medication. As soon as a result was apparent lithium alone was ordered for a longer period. The treatment was sometimes applied to patients whose condition improved with modified continuous narcosis, but remained uncertain and unstable; however, mostly it was given independently of modified continuous narcosis. It is too early to say anything definite about the results, but some cases show that it is worthwhile to continue the trials.

A married woman, aged fifty-one years, was admitted to hospital on May 13, 1952. For five years forgetfulness and occasionally incoherent speech had been noticed. Lately she had experienced, in connexion with business difficulties of her husband, considerable worries about her own estate. On her admission to hospital she was restless, demonstrative and unable to give any rational account of anything. Maniacal symptoms proper were absent, although she often talked incessantly. Strong sedatives and electroconvulsive therapy were useless. She was put on combined lithium medication, and after four weeks a surprising improvement started. She felt well and was genuinely thankful for the treatment she had resented at first. Her behaviour remained normal after she had been put on lithium alone, and she was discharged from hospital on September 7. After seven months at home the husband wrote that she was in better health than for many years, and this was later confirmed by a Christmas greeting that I received from them. This was a case of acute melancholia, brought about by a series of unfortunate events.

Involutional melancholia was the diagnosis in the case of a married woman, aged forty-nine years, who was admitted to hospital on February 7, 1953. A state of morbid depression had lasted for eleven months; she stood about helplessly and at times was mildly agitated. Auditory and visual hallucinations were present. Finally she required continuous comfort from her husband and was unmanageable. In hospital she was depressed and restless. After a single electroconvulsive treatment she was put on combined lithium medication. It seemed to be unsuccessful at first; she often had fits of temper and hit nurses and patients. But after three weeks she became more settled. She was dizzy at times, and her cooperation was still incomplete. By the end of March the improvement was pronounced, and she was given work at the occupational centre. A gradual progress was noticeable by the quality of her handicraft work. She was no longer troublesome, but displayed rigid attitudes. Lithium citrate, which had been given alone for some weeks, was discontinued and replaced by œstrogen. The progress in her work was remarkable now, and she became a useful seamstress. On June 21, 1953, she was discharged from hospital.

Two cases of schizophrenia may be mentioned.

An unmarried woman, aged forty-one years, admitted to hospital in 1951, was described as a chronic schizophrenic of five years' standing. The main symptoms were disorientation, dissociation of affect and considerable personality disintegration. She had always been strange and difficult, but intellectually of a remarkably high standard. She had a confidential post in a Government department and was the author of short stories and plays which had been published. Her physique was frail and asthenic. Her speech was rapid,

incoherent and distorted. Insulin and electroconvulsive therapy did not improve her condition; she remained absent-minded and dull and her answers to questions were vague and evasive. Once she was asked to write a letter to her mother, which she had not done for several months; she wrote, indeed, but the contents of the letter were thoroughly nonsensical. In March, 1952, she was put on combined lithium medication, but it had to be stopped after five days because of continuous vomiting. Combined lithium medication was instituted again at the end of November, with reduced doses. After only a week a certain improvement was noticed; she was more approachable and took up handicraft work spontaneously. After two months she was put on lithium treatment alone, and she gradually progressed afterwards. She wrote pleasant and rational letters to her mother and a woman friend. Her behaviour was more natural, yet still mildly affected. There was great progress, although her discharge was not possible for some time.

A girl, aged fifteen years, had displayed schizophrenic symptoms five months before her admission to hospital. A course of insulin coma treatment elsewhere had brought her temporary relief. Three weeks before her admission to hospital she required treatment again, as she was shut in and uncommunicative, read hidden meanings into things around her, and was sure that everybody knew her thoughts. She heard voices which tormented her, and became excitable and completely non-cooperative. In the hospital she was at first resistant and hardly manageable. She admitted hearing voices. In letters she implored her parents to take her home, and showed no appreciation of her condition. Combined lithium medication soon resulted in better behaviour. She was more cheerful and cooperative, yet impulsive and violent at times. She improved in conduct, but complained in letters of strange misgivings and was afraid that she might stay in the hospital for twenty or more years like other patients she had met there. Finally, after a short period of obvious depression and uncertainty, she remained well and took up housework and handicraft work spontaneously. She was discharged from hospital six weeks after her admission. The psychiatrist who had certified her was surprised by her complete recovery.

There are more cases in which favourable results were achieved, and combined lithium medication should perhaps become the subject of large-scale investigations. The beneficial results in mania achieved with lithium alone have been confirmed; and objectionable symptoms were seen as well, not infrequently. Sometimes patients had to be taken off the treatment. Age plays no part as regards tolerance or intolerance for the drug. Often old people respond without any difficulty and young people suffer very much; but naturally in the case of the aged the treatment is discontinued more readily than for younger persons, for whom it may be worthwhile to carry on as long as possible until the dose has been found which is just tolerated. It need hardly be mentioned that ailments caused by toxic symptoms are at times quite beneficial for the mental state; but there is always the danger that we may lose control of the condition.

Discussion.

Modified continuous narcosis started with causal observations which proved that salicylate can be useful in the treatment of mental patients if it is accompanied by narcotic drugs, while it fails to yield any remarkable results without them. From such experiences originated the idea of combining in a similar way lithium citrate with narcotics. An important difference is evident immediately; lithium, described as a sedative without narcotic properties, has a specific power to relieve patients of a well-defined group of psychoses. The sedative properties of salicylate are negligible as far as mental patients are concerned. It causes numerous and immense alterations in metabolism and various bodily functions; such physical changes evoke mental reactions, and these are generally more stimulating than sedative. In the large quantities employed in modified continuous narcosis, salicylate is upsetting and apt to produce confusional states. Stimulation is not so obvious after ingestion of lithium, although toxic symptoms are not always absent and are even perhaps beneficial. Now it is common experience that soon after recovery from intoxication the general outlook brightens, and positive emotions come into the foreground—in other words, that relief from mental stress is foreshadowed by a period of disturbance and uneasiness, which ceases with recovery and gives way to sentiments of satisfaction and happiness. That is a well-known feature; however, one should not yet expect any lasting result for the mentality from such a state of mind, or fundamental alterations which are required in the successful treatment of the insane. Healthy people are able to proceed normally with their occupations and hobbies after a short period of intoxication, caused by drugs or by alcohol. In a way it is not very different with a mentally ill person; when he has recovered from intoxication he usually goes on in his former ways of thought and response, retaining his delusions and exhibiting strange behaviour. Something else is needed, and the point is to arrive at the idea of what his treatment requires beyond intoxication and stimulation.

It is common experience that mental patients need much larger quantities of narcotics than normal people for the simple purpose of quietening and restraining them from impulsive and violent actions. The consequence of this has been the decision to apply, in order to achieve a definite and lasting improvement, the strongest possible means of restraint by creating complete unconsciousness for short periods. That is the way of the coma and shock methods. In a rough outline it may be said that these modern procedures are mostly concerned with wiping out undesirable associations, and they are bound to leave it to the individual patient, as far as his capacities are saved from destruction through the disease, to restore a normal flow of associations and normal behaviour. We know that it is a long way from a single shock or coma treatment to the restoration of normal faculties; shock and coma treatments have to be continued for a long period before a definite result appears. It is somewhat different with modified continuous narcosis; one or two courses in a limited space of time are thought to be the starting point for a mental development which is instigated by the treatment and proceeds spontaneously afterwards. Intoxication by salicylate is stimulating, and the value of stimulation in psychotic and neurotic disorders is well known. Meerlo stressed this point in 1933. He showed that the original idea of prolonged narcosis (subduing the patient and making him fit for psychotherapy) was not always correct, and that often remarkable improvement took place before psychotherapy had started. Continuous narcosis was sometimes useful even if hardly any unconsciousness was evident, but just narcotic excitement.

So stress has been laid on the intoxicating character of sodium salicylate. However, it was evident that something else was required, and there is a special reason for giving narcotics as well, mostly in moderate quantities, in accordance with certain peculiarities of the diseased mind. It is a common feature of numerous persons with mental abnormalities that introspection and self-observation are increased, and the unembarrassed acceptance and associative development of the psychic contents are often impeded. Now it can be realized that narcotic drugs, by lowering the consciousness, make the person readier for unaffected acceptance of stimulating sensations and feelings. Such stimulation may be a kind of shock, limited to the psychic sphere, and for the patient the disturbing sensations may be different from the fears and delusions caused by the disease. They may appear strange and new to him, and may evoke new thoughts and attitudes and associations of a different kind as well. Usually we consider the hallucinations of schizophrenics as the outcome of unconscious fears or hopes or desires. Now with the intoxication, different points come into the picture which may arrest the patient's attention and necessitate uncommon forms of mental activity, in order that he may integrate the surprising and never before experienced sensations and feelings into his individual mental life—in other words, arrive at an understanding of them. But there is a serious handicap—the tendency of the average mental patient to introspection and self-observation. It prevents him from unaffected acceptance of new experiences, even of stimulating ones. At this point narcotics may be helpful; they lower the consciousness and may restrict the introspective trends so that stimulants may work without embarrassing impediments. Sodium salicylate is stimulating, but narcotics are clearing and facilitate the desired result. Modified con-

tinuous narcosis is just the starting point of a mental development which requires plenty of time to achieve its object.

Lithium is a sedative and not often a stimulant. In mania, introspection does not play a very important part, and here lithium displays a specific efficiency. If it is combined with narcotics, it may enable schizophrenics with undesirable introversion and introspection to accept more readily its relieving power, so that longer-lasting results are possible. It may be stated that modified continuous narcosis is sometimes useful after shock and insulin treatment have failed. Combined lithium medication was started more recently, and its value is still uncertain. However, some encouraging results should not be overlooked.

Summary.

Two new methods of therapeutic approach to mental diseases, modified continuous narcosis and combined lithium medication, have been outlined, and some results have been reported.

Acknowledgements.

The trials of modified continuous narcosis were started at Middlewood Hospital, Sheffield, United Kingdom, with the permission and encouragement of Dr. F. F. Thorpe, Medical Superintendent. Frequent and useful advice was given by Mr. F. J. Wheelan, Chief Pharmacist. At Lachlan Park Hospital trials with modified continuous narcosis and combined lithium medication were permitted by Dr. J. R. V. Foxton, Director of Mental Hygiene of Tasmania, and Dr. D. M. Anderson, Medical Superintendent; both were sympathetic and helpful. The faithful cooperation of Mr. V. G. Fox, pharmacist of the hospital, must not be forgotten.

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Reports of Cases.

POLIOMYELITIS IN IDENTICAL TWINS.

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Donnybrook, Western Australia.

SIMULTANEOUS poliomyelitis in identical half-caste twins from an isolated community is reported chiefly on account of its epidemiological interest, and because of its rarity.

No reference to poliomyelitis in twins, let alone identical twins, has been found in the British or American medical literature, and this may therefore be the first report of such an occurrence. In the "Annual Report of the Commissioner of Public Health in Western Australia" for 1950, however, there is a brief reference by the epidemiologist, Dr. D. J. R. Snow, to the occurrence of poliomyelitis in dissimilar twins, only one of whom developed paralysis.

The cases now described occurred at a time when only sporadic cases were being notified in Western Australia, and during a subsequent epidemic several months later only two cases appear to have originated in the area concerned, which was a small country centre about a hundred miles inland from Perth.

The twins arrived, unaccompanied, at the Infectious Diseases Hospital on October 30, 1953, with a tentative diagnosis of encephalitis or poliomyelitis. The brief history was obtained by telephone from the country practitioner.

Clinical Record.

Peter, a half-caste boy, aged two years, had had whooping-cough four months previously. About a fortnight prior to his admission to hospital he had become irritable, feverish and lethargic, refusing food, and a transient rash was observed. The irritability, fever and anorexia persisted, and he was then admitted to the country hospital, and given injections of penicillin. Several days later it was noticed that he could not move his right leg, owing to muscular weakness. He remained pyrexial during this time, and the motions were loose.

Examination of the patient on his admission to the Infectious Diseases Hospital revealed him to be a thin half-caste boy, who looked rather apathetic, but was sitting up and taking notice of his surroundings. His temperature was 98·6° F., his pulse rate was 108 per minute, and his respirations numbered 24 per minute. Examination of the eyes, ears and nose, throat, heart, lungs and abdomen revealed no abnormality. The cranial nerves appeared normal. There was slight neck and back stiffness. The chin would not touch the knees when the head was bent forward. The tripod sign was present, but Kernig's sign was absent. In the arms the deep reflexes, muscle tone and power were normal. The abdominal and cremasteric reflexes were present. The left knee and ankle jerks were present, and tone and power of the left leg seemed normal. The right knee and ankle jerks were absent, tone was diminished, and there was no voluntary movement of any of the muscles of the right leg. When placed in a most uncomfortable position, the right leg could not be moved. The plantar responses were both flexor. In the right buttock there were marks of numerous injection punctures, and there was some deep tenderness; passive movement involving the gluteal muscles on the right side produced obvious pain.

John, the identical twin of Peter, had the same medical history, except that the onset of his illness was two days later, and the symptoms in the first stage were milder. He, too, is said to have had a transient rash, and, like Peter, he continued to look ill, refuse feeds, have loose motions, and perspire excessively after the rash disappeared. He was brought into the country hospital from "the bush" only when he developed a limp in the right leg, and was transferred to Perth the next day, having received no injections.

On examination of John, his appearance and bewildered attitude were identical with those of his brother. His temperature was 99·0° F., his pulse rate was 112 per minute, and his respirations numbered 24 per minute. In the eyes, ears, nose, throat, heart, lungs and abdomen no abnormality was found. The cranial nerves appeared normal. There was no real neck or back stiffness, but bending the chin forward to the knees caused much discomfort. The tripod sign was present. The only central nervous system abnormalities were diminished right knee and ankle jerks, and pronounced weakness of the right anterior tibial group of muscles. When the right leg was placed in an awkward position, it was promptly moved. When the child stood up in bed, the weight was taken only on the left leg.

A clinical diagnosis of poliomyelitis was made in both cases, and lumbar puncture was not performed. Peter's temperature remained at 99·0° F. for three days, and thereafter both temperature and pulse rates were normal. John's motions were only occasionally loose, but Peter frequently

had four motions daily. The twins' appetites improved, but they remained completely placid and non-cooperative. John's neck and back stiffness disappeared in two days. After a week, he could just move his right leg and would stand up on his left leg. Peter could be persuaded to walk a few steps, with an obvious limp.

Two weeks after the boys' admission to hospital, samples of fæces and serum were packed in dry ice and sent by air to Dr. J. A. R. Miles, Research Fellow at the Institute of Medical and Veterinary Science, Adelaide. Unfortunately the fæces were found unsuitable for examination, but the report on the sera was as follows:

> The sera from the —— twins were both negative in neutralization tests against types 1 and 3, and both positive against type 2 polio virus, so presumably they were Lansing type infections . . .

A month after his admission to hospital, Peter was walking with a pronounced limp, and his right knee and ankle jerks were just obtainable. The muscle chart then showed weakness of the right anterior tibial and rectus muscles. John's limp had almost disappeared, and there was no detectable muscle weakness.

Discussion.

The clinical manifestations in these two cases, and in particular the quality, distribution and duration of the muscle weaknesses, are consistent with poliomyelitis. It is regrettable that virus could not be isolated from the stools, but the serological evidence of Lansing type infection is of special interest. Although paralytic poliomyelitis has not been recorded in "full-blooded" Australian aborigines, several cases have occurred in West Australian "mixed bloods". However, serological evidence of widespread infection among aborigines in Northern Australia has been recently disclosed (Miles, 1953), and recent work on Western Australian material has revealed the existence of Lansing antibodies in a considerable proportion of sera examined (Snow, 1954).

This variety of poliomyelitis infection is said to be less likely to produce severe paralysis than the other two types, and the comparative mildness of the paralyses in twins is therefore significant.

Opportunities of observing the course of an infectious disease in identical twins are rare, and this experience of poliomyelitis in identical twins is indeed exceptional.

The traumatizing influence of intramuscular injections in precipitating or increasing the paralysis of poliomyelitis is now well established (McCloskey, 1950; Hill and Knowelden, 1950; Geffen, 1950). It is therefore not unreasonable to assume that the injections which one of the twins received in the buttock may have been responsible for the more severe paralysis of the leg in his case. However, the paralysis was transient, and it is of interest to recall a recent experience (Grant, 1953), as follows:

> The upper-arm paralysis following injection tended to be fairly severe and lasting, whereas the paralysis of the leg following previous injection of antigen in the buttock was very transient.

Summary.

The occurrence of simultaneous poliomyelitis in identical twins of mixed blood is reported. No record of a similar experience has been found in the medical literature. The diagnosis was made on clinical grounds and supported by serological examination. One twin who received intramuscular injections of penicillin in the right buttock developed more extensive paralysis in the related limb, but in all other respects the illnesses in the twins were almost identical.

Acknowledgements.

This report has been written at the instigation of Dr. D. J. R. Snow, who arranged for the laboratory investigations. Thanks are due to him for encouragement and advice. For permission to publish this paper I am indebted to Dr. Ian Thorburn, under whose care these patients were admitted to hospital.

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Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"The Surgery of Pulmonary Tuberculosis", by James H. Forsee, A.B., B.S., M.D., F.A.C.S., F.A.C.P.; 1954. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson, Limited. 9½" × 6½", pp. 208, with 59 illustrations, one in colour. Price: 70s.

In three parts, dealing with principles, procedures and results.

"The Leaven of Love: A Development of the Psychoanalytic Theory and Technique of Sándor Ferenczi", by Izette de Forest; 1954. London: Victor Gollancz, Limited. 8" × 5¼", pp. 222. Price: 20s. 6d.

The author holds that personal dedication and devotion on the part of the analyst are essential elements in the restoration of personal integrity to those who are suffering from mental and emotional problems.

"Ancient Therapeutic Arts: The Fitzpatrick Lectures Delivered in 1950 and 1951 at the Royal College of Physicians", by William Brockbank, M.A., M.D. (Cambridge), F.R.C.P.; 1954. London: William Heinemann (Medical Books), Limited. 10" × 6¼", pp. 162, with 88 illustrations. Price: 25s.

Deals with the history of the enema, cupping and bleeding, counter-irritation and the intravenous injection of drugs.

"Babies and Young Children: Feeding, Management and Care", by Ronald S. Illingworth, M.D. (Leeds), F.R.C.P., D.P.H., D.C.H., F.R.P.S., and Cynthia M. Illingworth, M.B., B.S. (Hons.) (Durham), M.R.C.P. (London); 1954. London: J. and A. Churchill, Limited. 8¼" × 6", pp. 368, with 74 illustrations. Price: 18s.

Intended for parents and not for doctors.

"Babcock's Principles and Practice of Surgery", edited by Karl C. Jonas, B.S., M.D., M.S. (Surg.), F.A.C.S., F.I.C.S.; 1954. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson, Limited. 10" × 7", pp. 1544, with 1016 illustrations, 10 in colour. Price: £9 13s. 6d.

Represents an entire revision of a former book, "Principles and Practice of Surgery", by W. Wayne Babcock.

"Diagnosis and Treatment of the Acute Phase of Poliomyelitis and its Complications", edited by Albert G. Bower, M.D.; 1954. Baltimore: The Williams and Wilkins Company. Sydney: Angus and Robertson, Limited. 9" × 6¼", pp. 268, with 64 illustrations. Price: 70s.

Fifteen chapters by fourteen contributors.

"Oral Cancer", by J. Roy Bourgoyne, B.S., D.D.S., with chapters by David S. Carroll, M.D., and Ralph S. Lloyd, D.D.S.; 1954. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson, Limited. 9½" × 6", pp. 296, with 18 illustrations. Price: 70s.

The book was written so that "the average dental and medical practitioner . . . may be able to advise and direct the afflicted ones . . ."

The Medical Journal of Australia

SATURDAY, JANUARY 29, 1955.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE LONG-TERM AND THE CHRONICALLY ILL PATIENT.

CHRONIC ILLNESS and the way in which persons suffering from it should be treated have been discussed in these columns on more than one occasion during the last few years. The treatment of persons with acute illness calls for energetic measures and the outcome means either the recovery or the death of the patient. Sometimes recovery is not complete and a chronic illness may develop. Patients with chronic illness have to be cared for, and this indeed is one of the greatest problems which medical practitioners and hospitals have to face. In some places, the care of the acutely ill patient is hampered or made difficult because the chronically ill occupy beds which could be used to more advantage for acutely ill persons. Some idea of the immensity of the problem created by the chronically ill may be gathered from the fact previously mentioned by us[1] that, on a conservative estimate, about 25,000,000 persons in the United States (more than one-sixth of the population) suffer from a chronic disease; some 7,000,000 of these have appreciable disability as a result of their illnesses, and 1,500,000 are invalids. The position in Australia is not known. At the end of June, 1951, there were nearly 70,000 invalid persons in receipt of pensions, but this does not by any means cover all invalids. Although we cannot say that the number of chronically ill persons in Australia is known, we do know that the present number is likely to increase because the age of survival of the average person in the population is increasing and preventive medicine cannot be regarded as fully effective.

This subject is of great practical importance to Australia at the present time because of the operation of the National Health Service and the part played in it by medical benefits organizations. Attention should be drawn to the Cutter lecture on preventive medicine delivered at Harvard on May 6, 1954, by Dr. Thomas Parran.[1] Dr. Parran is well qualified to deal with a subject of this sort. He is at present Dean of the University of Pittsburgh Graduate School of Public Health, and he was for many years Surgeon-General of the United States Public Health Service. For the past five years he has been a member of the United States Commission on Chronic Illness. This commission was preceded and sponsored by a joint committee of representatives from the American Hospitals Association, the American Medical Association, the American Public Health Association and the American Public Welfare Association. Dr. Parran tells us that when it held its first meeting in 1949, the Commission on Chronic Illness recognized the difficulty of early diagnosis and also the unavailability of control methods. He states categorically that relatively little has been learned since then, although many studies grew out of the national conference of 1951 sponsored by the commission and built round the general theme: "Preventive Aspects of Chronic Disease." In 1951 a chronic disease was defined as one which: (*a*) was permanent; (*b*) left residual disability; (*c*) was caused by non-reversible pathological alteration; (*d*) required special training of the patient for rehabilitation; (*e*) might be expected to require a long period of supervision, observation or care. A second conference sponsored by the Commission on Chronic Illness was held in March, 1954, at Chicago. The theme of the conference was "The Care of the Long-Term Patient". It was agreed at this conference that long-term patients were "those suffering from chronic disease or impairment who require a continuous or prolonged period of care; that is, who are likely to need or who have received care for a continuous period of at least 30 days in a general hospital; or care for a continuous period of three months in another institution or at home". It was estimated at this conference that about 5,300,000 persons were substantially disabled by chronic disease or other impairment. This number is somewhat less than that quoted by us in 1948. Of the 5,300,000 persons, it was estimated that about 4,000,000, or about 80%, were not in institutions. It is interesting that the 1954 conference laid emphasis on the care of the long-term patient in his home. Clearly, if more persons with chronic or long-term illness were treated in their homes there would not be such a demand on hospital accommodation and a great part of the problem would be solved. Several factors do not favour this kind of care. To begin with, many homes are not at all suited to the constant care of a sick person, and the healthy persons in the home have neither the time nor the knowledge to give to the task. Many patients of the type under discussion demand constant attention if their requirements are to be met. Institutional care is necessary for them and it is for this reason that many of our hospital administrators have been advocating the establishment of what have been called "subacute hospitals". Again, we have to face the fact that when the home surroundings are suitable and members of the family have the leisure and the experience needed for the work, some of them are quite unwilling to be burdened with the care of a relative. We have to go further still and to add that when a member of the family is willing to undertake the care of a chronic-

[1] M. J. AUSTRALIA, October 16, 1948, page 471.

[1] *New England J. Med.*, August 19, 1954.

ally ill relative in the home, there comes a time when the problem is transferred from the sick person to the one who is looking after him. Nothing can be more wearing on the bodily and mental resources than the constant attention which has to be given by one person who has sole charge of a chronically ill member of the family. The sick person should, in these circumstances, be found a bed in hospital for a while, so that the one looking after him may have a rest. Parran discusses this point well when he says that the attendant is the one who requires rehabilitation. The care of a chronically ill person is not confined to the supply of his bodily needs and the provision of comfort for him. Parran quotes Dr. Anthony Rourke to the effect that in addition to medical care the prolonged term sufferer may need services to provide for the emotional, spiritual, economic, social and rehabilitative aspects of his condition. People often complain that the demands made on them by the chronically ill are excessive, that they are irritable and given to much talking, and that they are not satisfied for long with anything that is done for them. This is no doubt often true, but it is sometimes the result of the way in which the sick person has been treated by his friends and relatives. With a chronically ill person occupational therapy is necessary, and this will be more easily provided if the sick person, during health, has varied his activities and stored his mind with provender that can be drawn on in the time of enforced inactivity. If the sick person is not so ill that he is deprived of all activity, he will be helped if some small service can be found for him in the routine of the home. This is perhaps simpler when the person is a woman. It does not matter how small the responsibility is, if the sick person is allowed to feel that he or she is responsible for it and that no one can take it from him or do it as well as he can.

Parran points out that the overall obstacle everywhere is money. He writes that it is a truism that chronic illness and poverty tend sooner or later to become synonymous. "Too many patients in long term illness scrape the bottom of the barrel for food, clothing and shelter—to say nothing of doctors' bills." As members of the medical profession in Australia know full well, the Pensioner Medical Service is doing a great deal for those in this country who receive invalid pensions. They can obtain medical attention and pharmaceutical benefits. There are a great number of chronically ill persons who do not receive a pension and whose lot is far from easy. At present they are debarred from the full benefits of the National Health Service. They may receive the government benefit, but they are not allowed to draw on any of the medical benefits funds in respect of a chronic illness which exists at the time of their joining the scheme. After they have been members of a benefit fund for two years it is proposed that they will be able to receive full benefits. It is hoped that after the present health scheme has been in operation for some time suitable arrangements will be possible for the chronically ill.

Only the fringe of this large subject has been touched upon and no reader will have difficulty in finding additional aspects of it. The importance of prevention has scarcely been mentioned. Three points should be borne in mind. The first is the need for home care when that is possible; the second is the need for extension of the services into emotional, spiritual, economic, social and rehabilitative spheres; the third is the overall question of finance. At the end of his address, Parran remarked that the programme to improve the care of the chronically ill could succeed only if it was motivated by conscience and compassion and soundly based on knowledge which was the fruit of research. We may agree with him and we may add that the conscience or the sense of duty and compassion referred to here are not only those of the individual, but also those of groups and of whole sections of the community and even of the Government itself.

Current Comment.

MEDICAL ASPECTS OF TRAFFIC REGULATIONS IN FRANCE.

AT frequent intervals attempts to increase road safety are made by authority and by interested organizations, usually with some evanescent success; but the incalculable human element still remains. This is represented by the driver of any motor vehicle on the road, who often overlooks the fact that he is in control of a potentially lethal weapon. (For the present we shall not consider the pedestrian's responsibility.) That the problem is fundamentally the same in France as in Australia is evidenced by the French traffic regulations which were gazetted in the latter half of 1954. (Some people who have visited France and watched the Paris traffic in bewilderment may be surprised to learn that there are traffic regulations in that country.) An interesting comment on the changes in medical aspects of the new highway code has been presented by J. Boyer;[1] some of them may well be briefly considered here.

In France, as in Australia, one of the most frequent causes of serious road accidents is drunken driving. The new code provides for severe punishment of any drunken driver, whether he causes an accident or not; his licence may be suspended for a period not exceeding two years. A distinction is made between drunkenness and chronic alcoholism. Drunkenness is recognized as being responsible for the majority of accidents, while the chronic alcoholic is regarded as being capable of never being really drunk. However, he may, after medical examination, be considered incapable of driving and have his licence withdrawn. Boyer reports with obvious pleasure that it is now possible for medical evidence of drunkenness to be obtained. When the police are dealing with a traffic offence or with an accident, they are required by the new laws to have the presumed culprit submitted to clinical and biological tests, so that the presence of alcohol in his blood-stream may be detected. If damage has been done to property only, this examination is required only if one or more of the presumed culprits seems to be drunk. Whenever it appears advisable, the same examination is to be carried out on the victim. Boyer points out that previously when an accident occurred it was impossible to take blood for examination from an apparently drunken driver except with his consent. Since blood examinations were rarely made, drivers on trial later denied having been drunk and were given the benefit of the doubt. Barristers appearing for the accused did not fail to quote cases in which persons suffering from the cerebellar syndrome had been mistakenly regarded by the police as drunk. Boyer draws attention to false deductions that may be made if the results of blood tests are not interpreted with care. An inveterate drinker of alcohol may have a blood alcohol content as high as 1·5 grammes per litre without showing any signs of drunkenness, and under these conditions if he causes an accident it will be for other reasons. In such a person drunkenness is not certainly present if his

[1] *Presse méd.*, September 4, 1954.

blood alcohol content is less than 2·5 grammes per litre. On the other hand, a person who is not accustomed to taking much alcohol and is susceptible to its effects may be drunk with a blood alcohol content as low as 0·8 gramme per litre. If such a person causes an accident, it will be on account of his individual susceptibility to the effects of alcohol. For these reasons the results of blood alcohol estimations must be interpreted only in association with the findings on a careful clinical examination.

In the new code are set out the conditions under which medical examination of drivers is required. Much of the detail in this section is of great interest, but cannot be discussed in this place. However, we may notice briefly the various categories of drivers and the law's requirements with regard to them. The first category comprises drivers of tourist vehicles carrying more than eight passengers. These drivers must be carefully selected from the physical point of view. By the old code they had to submit themselves for a medical examination every five years, and the same provision is made in the new code. Its wisdom is obvious, but attention may be drawn to one of the implications. Boyer points out that such tourist vehicles usually have their regular stopping places at premises where alcoholic drinks are sold, and the drivers are therefore likely to be urged to drink. By these regular medical examinations the earliest signs of alcoholism are detected (slight tremor, slight enlargement of the liver or spleen *et cetera*), and the driver can be instructed to return for further examination in a few months, and warned that, if he has not given up drinking, at his next visit he will be reported as incapable of holding a licence. This is usually sufficient to stop him from drinking. The second category covers taxi drivers, who now are also obliged by law to undergo a medical examination every five years. The conditions of fitness are not so stringent as for tourist vehicle drivers. Boyer thinks this quite in order, since taxi drivers' licences allow them to drive ordinary motor-cars only. In this country some eyebrows may be raised at this opinion. The third category comprises drivers of heavy transport vehicles, and Boyer is disappointed that in the new code no provision has been made for the periodical medical examination of these men. From his comments it is obvious that representations had been made to the Ministry of Public Works on this matter, but there was some division between the medical and lay members of the commission involved, and the request was not granted. These drivers are required to undergo an initial medical examination only. One of the reasons advanced by Boyer for the need for periodical examinations is the possibility that such drivers may gradually become deaf; he calls attention to the plight of other motor vehicles held up behind such heavy vehicles, unable to pass because the driver fails to hear their horns. This situation is a common cause of exasperation on Australian roads. Boyer also refers to the possible decrease in visual acuity in such drivers, and to the likelihood that cardiovascular and other disorders may gradually develop. He is convinced that medical examinations at the ages of twenty, forty and fifty years, and every five years thereafter, are desirable.

The final category comprises drivers of ordinary motor-cars for their own pleasure, and motor cyclists; for these no detailed medical examination is required at the time when their licence is issued. Boyer is in agreement with this. He holds that they are only occasional users of the roads, and that any accidents they cause are likely to be less severe than those caused by drivers in the other categories, because of the lightness of their vehicles. However, the new code provides for a medical examination to be ordered in certain circumstances. When a person applies for a driver's licence in this category, the person who examines him (not a medical man) must assure himself that in general the candidate is sound in wind and limb, and that he can see and hear adequately; if any obvious defects are detected, a medical examination is ordered. Sometimes a medical examination is ordered if the candidate is of advanced age. When medical examinations are carried out on persons in this category, if the examiner discovers some defect which does not disqualify the candidate at once, but is likely to grow worse, he may authorize a licence to be granted for a limited period, at the end of which another examination may be required. Further, if the holder of a licence in this class is later found to be suffering from a temporary or permanent disorder that would disqualify him from being granted a licence, his licence may be instantly suspended or cancelled. Medical examinations in relation to the granting of drivers' licences covers the following sections: (i) heart, blood vessels, kidney; (ii) eyes and visual acuity (it is interesting to note that correction by contact lenses is not permitted); (iii) respiration and hearing; (iv) mental status; (v) nervous system and muscular development; (vi) thorax and abdomen. The exact requirements in all these classes are set out in detail, but we cannot reproduce them in this place.

Finally, apart from the fact that in Paris now a lighted tail-light is no longer required on a stationary vehicle at night, mention may be made of two provisions in the new code, the first of which affects not drivers or pedestrians, but people living near busy roads. This concerns noise. It is now provided that mayors, with the permission of the local prefect of police, may either restrict or prohibit the use of motor horns except in case of immediate danger. Advantage was at once taken of this provision in Paris and in certain other cities. However, Boyer points out that although this will diminish the noise in some areas, it will not abolish it; he refers feelingly to the din caused by motor-cycles and by some motor-trucks, and expresses the hope that the fitting of silencers to the former will sooner or later be enforced. The second provision concerns fumes; the code now provides that motor vehicles must not emit fumes that may be dangerous to traffic or distressing to other road users. Those who have been obliged to travel slowly for any distance in the wake of a diesel-driven bus will vigorously applaud this measure, and wish that something similar might be introduced in this country.

This account of what another country is doing to try to reduce the traffic menace is necessarily brief. The subject is of importance to all who use the roads all over the world, and any measures that in some way minimize the toll of the road should be investigated as widely as possible. In this as in other aspects of life, empiricism still has a place.

REACTIONS TO INJURY.

THE wounded soldier has, in general, a much better chance of saving his life and of being restored to normal than had his father, and a very much greater chance than had his grandfather. Advances in the treatment of injury have been stimulated in a major degree by the wars of the last fifty years, and have resulted, not merely from better organization and from more or less empirical improvement in treatment, but from greater knowledge of the body's essential response to injury. The advances have, of course, been carried over into the treatment of injury in civilian life, and some appreciation of what is now known on the subject is of general medical importance. An excellent summary of present knowledge of the reactions of the body to injury is provided in a group of papers recently published.[1] Unfortunately, as Sir Edward Mellanby points out in his introduction to the symposium, the public are probably much more interested in lethal processes such as the atom bomb than in life-saving discoveries, and there is but little popular appreciation of the revolution that has resulted from increased knowledge of treating injured people in the last ten years. Perhaps these modestly written papers will not shake the superficial reader out of this attitude, for, as Mellanby says, it is the way of the scientific worker not to emphasize the degree of successful achievement so much as the problems and the difficulties which still beset him. In relation to trauma, these difficulties remain great, especially that of getting insight into the precise mechanism whereby injuries produce widespread depression in functional

[1] *Brit. M. Bull.*, Vol. 10, No. 1, 1954.

activity of many remote organs and tissues. Nevertheless, the twenty distinguished scientists who contribute to this symposium have much to offer. Some basic problems in the understanding of shock are tackled by F. C. Courtice, the Director of the Kanematsu Memorial Institute of Pathology at Sydney Hospital, in a paper on body fluid distribution in injury. J. P. Bull writes on the shock caused by burns and its treatment, and R. T. Grant on the diagnosis and treatment of wound shock in limb injuries; the value of transfusion in treating the immediate systemic effects of injury in man is indicated by R. B. Scott. The provision of materials for transfusion after injury is the subject of a series of papers, introduced by Sir Alan Drury; here some recent work is described which holds out hope for a major extension of the useful life of whole blood, and other papers deal with plasma substitutes and plasma fractions in the treatment of injury. Biochemical aspects of injury that are considered include the interrelationship of metabolic changes consequent to injury, the effects of injury on carbohydrate metabolism and energy transformation and the reaction of enzymes to injury. A paper on the physiological and biological disturbances produced by war gases reminds us that this subject is by no means dead. Other special subjects are gas gangrene, tetanus, head injury, pulmonary fat embolism and demyelination. As Sir Edward Mellanby remarks, for those interested in this branch of medical science and especially for those about to enter this field of study, there could be no better starting off ground than the present volume, in which the articles are written by experts and by those who have contributed substantially to the discoveries described.

THE DANGERS OF POTASSIUM PERMANGANATE.

A CERTAIN number of remedies in use for generations have maintained their popularity in the face of modern competition. From time to time, however, one of them comes under fire. Recently it has been boric acid, whose continued use, even as a minor household remedy, seems inadvisable. Now, criticism has been directed at potassium permanganate. Its use has been mainly as a disinfectant in various fields, but the present attack comes from two gynæcologists, A. C. Lammert and R. B. Scott,[1] their comment being prompted by an apparent increase in the use of, and the complications resulting from, potassium permanganate tablets and douches in the vagina. They point out that pharmacologically its action is that of an oxidizing agent. When it comes in contact with organic material it is reduced to manganese dioxide with the liberation of nascent oxygen and the formation of potassium hydroxide, which, especially in higher concentrations, has corrosive powers capable of producing serious hæmorrhage and shock. Administered systemically, potassium permanganate may cause convulsions and coma, intravascular hæmolysis and hyperpotassæmia. Most surgeons have discarded it as a disinfectant agent, but its use persists here and there, especially in the treatment of skin conditions and as a popular vaginal douche. Lammert and Scott state that within the last twenty years and through devious channels of information, potassium permanganate tablets inserted into the vagina, and potassium permanganate solutions used as douches, have been recommended as abortifacients. The incidence of this practice has apparently been increasing, and it has spread from Europe to America. Many complications, including death, have been reported from its use. Lammert and Scott report their experience with fourteen patients treated at university hospitals of Cleveland in just under two years. All had vaginal evidence of damage from the use of potassium permanganate. Four required sutures to control bleeding, and in two cases the bleeding was controlled by a vaginal pack. Four patients had suffered sufficient blood loss to require whole blood transfusions. The typical lesion is stated to be a punched-out ulceration covered by a black, jelly-like material, which is manganese dioxide. Vaginal inspection is essential for diagnosis. The bleeding results from erosion into vessels deep in the vaginal mucosa and can be in itself a serious matter. In many instances, the damage apparently followed the use of potassium permanganate in solution as a cleansing douche; it has been found that despite considerable care undissolved fragments of the tablet can pass through the douche nozzle and be deposited on the vaginal mucosa. In other cases the damage followed the deliberate use of a whole tablet of potassium permanganate as an abortifacient. In some cases the bleeding responded to simple measures, but in others, as has been stated, more drastic treatment was necessary. Lammert and Scott are of the opinion that the possible dangers of the intravaginal use of potassium permanganate outweigh any possible advantages, and that prescribing, advising or dispensing the drug for gynæcological treatment should be discontinued. This seems to be a sound view. Perhaps a survey of the use of potassium permanganate in other fields would show that, like boric acid, it could with advantage be dropped altogether from the list of therapeutic agents.

[1] *Am. J. Obst. & Gynec.*, September, 1954.

NEW AIDS IN INVESTIGATION: MICRORADIOGRAPHY, AUTORADIOGRAPHY AND X-RAY MICROSCOPY.

MEDICAL SCIENCE has always been eager to adopt as aids in investigation new techniques as they are developed in other sciences. Three of these, which were the subjects of a recent symposium before the Scientific and Technical Group of the Royal Photographic Society of Great Britain,[1] are of present interest.

The ordinary radiograph represents a shadow picture of slightly greater than natural size. Since X rays cannot be refracted by any lens system, no method of enlargement by a series of lenses is possible. Fine structures can, however, be examined if the radiograph is produced with maximum resolving power, and the resultant photographic image magnified by optical means. Such a method is referred to as microradiography, and is of value in investigating the internal structure of metallurgical and biological specimens. With biological specimens, it is possible, by radiographing unstained thin sections, to determine the areas of distribution of heavier elements (as, for example, the accumulation of lead and other heavy elements in bone), or by using a metallic staining solution to impregnate selectively particular areas of a specimen and to demonstrate them by virtue of their increased absorption to X rays.

Although some aspects of microradiography can be attempted with conventional X-ray equipment, very specialized apparatus is essential if the method is to be used to the best advantage. To increase the differential absorption between elements of fairly close atomic number, X rays of relatively long wave-length are required, involving the use of special tubes with small focal spots and windows of beryllium, and operated at low voltages (from 5 to 20 kilovolts). Because with these long wave-lengths the grain of any paper in which the photographic film is wrapped would result in distinguishable shadows, a light-tight camera, fitting on the tube and containing the specimen to be examined and the uncovered photographic plate, is desirable. For work with lower voltages, this camera should be evacuated to reduce the absorption of the rays in the air. The photographic emulsions used are of the high resolution type, which permit of subsequent enlargement by optical means of from 300 to 700 diameters. With the higher magnification, there is some inevitable blurring of the image due to the grain in the emulsion.

Some attempts have been made to produce a primary magnification in the initial radiograph by placing the

[1] G. A. G. Mitchell, "Microradiography in Biology"; R. V. Ely, "Instrumentation in Microradiography"; V. E. Cozlet, "Microscopy with X Rays"; L. G. Lajtha, "High Resolution Autoradiography"; L. F. Lamerton and Eileen B. Harriss, "Resolution and Sensitivity in Autoradiography"; *J. Photographic Sc.*, July-August, 1954.

photographic plate at some distance from the object. Since the radiograph is essentially a shadow picture, an extremely fine focal spot is required if excessive blurring in the magnified image is to be avoided. By using magnetic focusing of the electron beam, special tubes have been developed with focal spots of the order of one micron, which enables a direct magnification on the radiograph of about 20 to be obtained without appreciable distortion. The necessary further optical magnification is then not excessive, and the disadvantage of obvious graininess in the image is avoided. The use of such fine focal spots, however, sets a relatively low limit to the possible tube current, and long exposures (of the order of hours) are required.

From papers read at the symposium, it is obvious that the special equipment for microradiography is expensive, while its operation requires the facilities of an extensive physical laboratory. Biological specimens for investigation can be of two types, either small objects of a few millimetres in thickness, or microtome sections preferably thinner than those used normally in histology. Typical small objects are teeth, small portions of bone, and calcified deposits. Sections of tissues and organs can be examined to detect the presence of abnormal radio-opaque substances; typical cases are sections of lung tissues to demonstrate various types of pneumonokoniosis, and of other organs in which arsenic, iodine, bismuth, thorium, lead and mercury can be selectively absorbed. By the injection of a finely divided radio-opaque suspension or a solution, the number and distribution of vascula, tubules and ductules in organs can also be examined. It is generally agreed that microradiography, in its present stage of development, merely supplements and in no wise supplants orthodox histological and microscopic techniques. It is possible, however, that improved apparatus and better techniques may lead to a revision of this view.

Autoradiography refers to the production of a photographic record of distribution of a radio-active material by means of the radiations it emits. By placing a radium needle or tube in contact with a photographic plate, for example, it is possible to obtain an autoradiograph showing the active length and distribution of activity along the length. The autoradiograph is a very sensitive means of detecting the presence of a radio-active material, since the exposure can be prolonged over several days, the photographic effect being cumulative. When fine grained photographic emulsions are used, the distribution of radio-activity as between cells in a section of tissue can be demonstrated. The autoradiographic technique therefore provides a powerful tool in investigating metabolic processes using radio-active isotopes as tracers, and can give information not available from any other type of investigation.

Autoradiography is available for macroscopic (for example, in determining the distribution of a radio-isotope in the leaves, stems and stalks of an entire plant) as well as for microscopic examinations of thin sections. The principal interest is obviously in the latter type, and special techniques have been developed to give the highest possible resolution and therefore the most unambiguous information.

In autoradiography, the problem is to register two closely adjacent sources of radiation as discrete images. For this to be done, it is necessary that the section of material being investigated and the layer of photographic emulsion should both be as thin as possible, and in close contact. Since subsequent magnification of the autoradiograph is required, the grain size of the photographic emulsion must be small. Since the relative photographic action progressively decreases from α to β to γ rays, while the range of pentration increases in that order, sensitivity and resolving power are greater for α-emiting radio-isotopes. Autoradiography is therefore more satisfactory with radio-isotopes emitting either α or β rays.

By comparing the magnified image of the autoradiograph with that of the stained microtome section producing it, it is possible to determine exactly which cell structures within tissue or bone contain the radio-active material. When high magnifications are used (for example, $\times 1000$ or even $\times 3500$) it becomes difficult to identify with certainty the same areas of field in the section and the autoradiograph. It is, however, possible to mount the stained section first on a microscope slide, overlay it with a thin adhering film of photographic emulsion, expose it possibly for several days, and then process it in the usual way. On subsequent microscopic examination, it is easy to associate areas of radio-activity with the definite cell structures, since both the stained section and the autoradiograph are viewed together.

Autoradiography has been shown to be capable of providing information regarding the presence of a radio-isotope in cells which is not obtainable by other means. Two papers read at the symposium deal with possible extensions of the method into more difficult fields. In one, a very detailed analysis is made of the factors determining resolution and sensitivity in the autoradiograph. It is shown, for example, that by reducing the thickness of photographic emulsion and specimens, the resolution can be reduced to as low as two microns. Where the area affected by radiation is determined by actually counting the number of grains of silver per unit area rendered developable, quantitative estimations of the amount of radio-isotope present can be made with reasonable accuracy.

The second paper describes how increased resolution can be obtained if the material to be examined is a "smear" rather than a microtome section. With the smear, almost a monocellular layer is obtained, with individual cells reasonably distant from each other. Under these conditions, a recognizable photographic effect can be obtained with fifty radioactive atoms within the cell. Such sensitivity not only permits the study of the uptake and intracellular localization of an element within the cell, but can give information as to the chemical form in which the element is being utilized. If, for example, a suspension of cells from bone marrow is grown in a culture medium to which radioactive phosphorus in the form of orthophosphate has been added, some of this phosphorus will be taken up by desoxyribose nucleic acid, ribose nucleic acid, phospholipids, phosphoproteins, and various other compounds. If the synthesis of desoxyribose nucleic acid is being investigated, the other compounds can be removed successively by treating the section with various solvents before the application of the photographic emulsion. The resultant autoradiograph will then show the areas in which a particular synthesis has occurred. Such methods are expected to be of considerable value in the investigation of fundamental problems in biochemistry.

The symposium also included a discussion on the possibilities of microscopy with X rays. The resolving power of any microscope system increases with decreasing wavelength of the illumination. The ultra-violet microscope, using lenses of quartz, provides an improved resolving power over instruments using visible light. Any further increase of resolving power by utilizing the shorter wavelengths in the X-ray region is not possible with any lens system, as X rays are not subject to sufficient diffraction by any possible lens material. Attempts have been made to construct reflecting microscopes for X rays by the use of mirrors instead of lenses. This has been done for ordinary light, but for X rays the mirrors require more careful construction; they must be used at nearly grazing incidence, and the source of X rays must closely approximate to a point. In the experimental models of the X-ray microscope so far produced, the initial magnification has not exceeded 30, but the photomicrograph can then be further magnified by optical means another 60 to 80 times. Resolutions of down to 0·05 micron have already been obtained, equal to those obtained with ultra-violet light, but appreciably less than that obtained by the electron microscope. It is expected that further attention will be paid to the development of X-ray microscopy, because the method promises in certain cases to be more rapid and convenient than either optical or electron microscopy.

The several papers contain clear diagrams illustrating the equipment and techniques, as well as excellent examples of the photographs obtained. It can be expected that all three methods will be used to an increasing extent in a variety of investigations.

Abstracts from Medical Literature.

THERAPEUTICS.

Treatment of the Resistant Stages of Hodgkin's Disease and Lymphoblastic Diseases.

A. HOCHMAN AND M. ICKOWICZ (*Brit. J. Radiol.*, August, 1954) state that in the treatment of patients suffering from lymphoblastic diseases with either X rays or nitrogen mustard, the lesions may cease to respond after several courses of treatment. A relationship has been postulated between adrenal activity and the effect of X rays and nitrogen mustard on lymphatic tissue, and it was thought possible that adrenal exhaustion might account in part for the diminished efficacy of the therapeutic agent. On this assumption it was decided to try a combination of cortisone and nitrogen mustard in the treatment of patients who had ceased to respond to irradiation or nitrogen mustard. A total of eleven patients was studied. All were in advanced stages of the disease, and their clinical findings included marked hepato-splenomegaly and generalized glandular enlargement including mediastinal and abdominal masses. Cortisone was given in doses of 50 to 100 milligrammes daily. In a preliminary trial on four patients this was found to be without effect. When combined with nitrogen mustard, administration of cortisone was usually started one day before any nitrogen mustard injections. Nitrogen mustard was given intravenously as a 0·1% saline solution, in a dosage of 0·25 to 0·5 milligramme per kilogram of body weight daily. All the patients showed some degree of improvement, particularly in cessation of pain and fever. This improvement was of short duration, lasting from one to four months. In a few cases a second course of treatment was given, and in some of these a further remission was obtained.

Isoniazid (Isonicotinic Acid Hydrazide) and Skin Tuberculosis.

F. LATAPE, E. ESCALONA, O. RODRIGUEZ AND S. C. ESTRADA (*Arch. Dermat. & Syph.*, June, 1954) state that during a nine-month period, 16 patients (nine males and seven females) were treated with isoniazid. Ages varied from eight to eighty-four years. Four patients were suffering from *lupus vulgaris*, four from *tuberculosis verrucosa cutis*, four from *tuberculosis colliquativa*, two from papulonecrotic tuberculid, one from *tuberculosis indurativa*, and one from *tuberculosis fungosa*. The duration of the disease varied from eighteen months (*tuberculosis colliquativa* of the neck) to forty years (*lupus vulgaris* of the arm). Isoniazid was administered in 100-milligramme tablets of "Nydrazid". Dosage varied from three to eight milligrammes per kilogram of body weight per day. No other drug known to have antituberculosis activity was used concomitantly. The authors state that the therapeutic activity has been equal, and in some cases undoubtedly superior to that of other treatments previously employed for skin tuberculosis. No evidence of intolerance to the drug was observed. In five patients of the series the lesions cleared up completely, leaving only cicatricial sequelæ, keloid in two cases. In others, there was evident reduction in the activity of the lesions. The favourable results occurred more rapidly in patients with *tuberculosis verrucosa cutis* and *lupus vulgaris*. Eight patients were submitted to treatment for more than six months, seven for two to four months, and one for one month only.

Anticoagulant Therapy in Acute Myocardial Infarction.

HENRY I. RUSSEK AND BURTON L. ZOHMAN (*Am. J. M. Sc.*, August, 1954) discuss the selection of patients for anticoagulant therapy in acute myocardial infarction. They analyse the results of treatment of 122 patients with acute myocardial infarction who were regarded as "good risk" cases, because they present no poor prognostic signs on the day of admission to hospital. These patients were treated by conservative measures alone and without the benefit of anticoagulant drugs. The poor prognostic signs were as follows: previous myocardial infarction, intractable pain, extreme degree or persistence of shock, significant enlargement of the heart, gallop rhythm, congestive heart failure, auricular fibrillation or flutter, ventricular tachycardia or intraventricular block, diabetic acidosis, marked obesity, previous pulmonary embolism, varicosities in the lower extremities, thrombo-phlebitis (past or present), and polycythæmia or other states predisposing to thrombosis. Prognostic classification and decision with regard to the use of anticoagulant drugs were made on the day of hospital admission in each case, and of the 122 selected "good risk" cases, 24 were females and 98 were males. The ages ranged from thirty-two to seventy-eight years with a mean age of 56·6 years; 35% of the patients were sixty years of age or older, and 60% were admitted to hospital on the day of the attack and over 80% within forty-eight hours of the onset of symptoms. The patients were encouraged to move about freely in bed, and leg exercises and self-help including shaving, washing and feeding were permitted early. Sitting in a chair was allowed after one to two weeks in most cases. Close scrutiny was maintained for evidence of thrombotic complications. Six of the 122 patients died during the period in hospital, with a resultant mortality rate of 4·9%. The death rate for 119 patients surviving beyond the first forty-eight hours of the attack was only 2·5%. Analysis of the causes of death revealed that the preventable mortality under ideal anticoagulant therapy would have been at most 0·8% in this group of patients. This strikingly low mortality rate confirms the excellent prognosis for "good risk" cases when survival extends beyond the first few days of the attack. Similarly, it challenges sharply the widely held view that even in milder cases of acute myocardial infarction the outcome is unpredictable. Clinical thromboembolic phenomena occurred in only four cases, an incidence of 3·3%. In two of these four cases, diagnosis was only presumptive. There was no instance of cerebral or peripheral arterial embolism in the entire series. The authors state that all reports in the literature to date concerned with the prognosis of "good risk" cases clearly reveal that the mortality rate in such groups cannot be influenced significantly by anticoagulant therapy. The incidence of hæmorrhagic complications and death due to anticoagulant drugs, even when prescribed by the most competent investigators, appears to outweigh any benefit which such therapy may confer in milder cases. The present study, therefore, confirms the practicability and justification of prognostic classification as a means of selecting patients for anticoagulant therapy in acute myocardial infarction. It is estimated that no more than 30% of all patients with this disease represent suitable candidates for anticoagulant therapy. Nevertheless, the value of such treatment in properly selected "poor risk" cases must not be minimized. The authors confirm previous findings of earlier studies that age plays no part in the immediate prognosis of a clinical attack of known severity. The initial clinical appearance of the patient, regardless of age, therefore constitutes the best index to his future course and the deciding factor regarding the need for anticoagulant therapy.

Methonium Compounds and Hypertension.

JOSEPH B. WOLFFE *et alii* (*J. Am. Geriatrics Soc.*, June, 1954) describe their experience with hexamethonium bromide, chloride, iodide and bitartrate in the treatment of 150 hypertensive patients. Both the parenteral and the oral routes of administration were used, but susceptibility to parenteral use of the drug was found to be unpredictable and at times alarming. The authors state that administration should be started cautiously with a test dose of five milligrammes, and that the patient should be in hospital during parenteral administration of methonium compounds until the ideal dose has been established. Lowering of the blood pressure is usually greatest when the patient assumes the erect position; if this is not taken into account when the maintenance dose of the drug is being established, dizziness and fainting may result when these patients stand for any length of time. Coronary vascular thrombosis has been reported from the precipitous and sometimes unpredictable lowering of the blood pressure following parenteral administration of methonium compounds. The authors describe their dosage system in detail. In the series of 150 patients, 58% suffered from essential hypertension, 6% from malignant hypertension, and 16% from atheromatous, endocrine or mixed hypertension. The remaining 20% had chronic glomerulo-nephritis, bilateral polycystic kidneys, Kimmelstiel-Wilson's disease, toxæmia of pregnancy and phæochromocytoma. The effectiveness of methonium was judged by the patient's symptomatic response rather than by the blood pressure readings alone. The authors state that relief of such symptoms as headaches, palpitations, vertigo and effort angina occurred in over 60% of the patients treated. Improvement was

noted in four of nine patients with malignant hypertension. The results obtained in a group of 11 sympathectomized patients, whose symptoms returned in a more severe form in from one to five years after surgery, were especially noteworthy. Eight of the 11 observed for eighteen months showed subjective improvement; all took the drug both orally and parenterally, and they learned to judge the needed dose. The improvement in all cases may be attributed to rest periods for the cardiovascular system afforded by the action of the drug. In 11% of this series, the patients could not tolerate the drug or were afraid of the effects. Approximately 27% showed no improvement in spite of persistent continued trial. Four patients died, but none of the deaths could be ascribed directly to the action of methonium. The authors state the most significant ill effects following the use of methonium are postural hypertension (relieved by assuming the supine position), constipation (usually relieved by the use of "Prostigmin", mineral oil or mild laxatives), urinary retention (relieved by prostigmin and catheterization), nausea and hiccough (relieved by carminatives), drowsiness (a symptom to be watched carefully, particularly in advanced renal disease) and amblyopia. These side effects disappear fairly quickly as a rule, but amblyopia and loss of accommodation may persist for months. Drowsiness and rash caused by methonium bromide disappear with a change to chloride or bitartrate compounds. In this series, the best results were obtained in cases of benign essential hypertension. In cases of renal hypertension, the blood pressure was lowered without affecting the course of the disease. There was no evidence of tissue or organic damage resulting from the use of methonium. The authors state that both patient and physician must be continually aware of the possible side effects of the drug, and the dosage must be standardized for each patient.

NEUROLOGY.

Treatment of Neurotic Patients.

ARTHUR HARRIS (*J. Ment. Sc.*, July, 1954) states that 120 psycho-neurotic patients at the Maudsley Hospital were divided into two groups of 60 each. The respective groups were treated by two different methods, psychotherapy and carbon dioxide treatment. Their condition was assessed after an interval of a year. No really significant differences between the two groups were discovered.

Mechanisms of Voluntary Movement.

WILDER PENFIELD (*Brain*, March, 1954) states that in 1947 Walshe stated that the human pyramidal system, of itself, initiated nothing, and that to speak of it as responsible for this or for that category of movements was to ignore the source and motive power of its activities; he then stated that willed movement was activated by controlling cortical afferent patterns of excitation. The author from his cortical stimulation and ablation experiments produces the hypothesis that it is not from cortical afferent patterns but from the higher brain stem that voluntary movement is initiated. He calls this the centrencephalic system. This system is the "highest level" of neural integration. Hughlings Jackson spoke of the "highest level" and placed it in the frontal lobe, but the author maintains that its localization is in the centrencephalic system in the brain stem. Recent anatomical and physiological findings regarding the afferent and efferent connexion of the cortex to the centrencephalic system lend support to the author's hypothesis.

A Problem in Sex Pathology

VERNON W. GRANT (*Am. J. Psychiat.*, February, 1954) calls attention to the phenomenon of sexual fetishism. He states that various theories have been offered: (*a*) an accidental association on the occasions of intense sexual excitement which may become the condition factor in the fetishism, (*b*) psychoanalytical theory, (*c*) the suggestion that to a degree fetishism is a normal reaction, inasmuch as one pattern of features and behaviour may intrigue one with erotic æsthetic feelings. The author points out also the extraordinary specificity of the conditioning stimulating factor in many cases, and the extraordinary intensity of the impulse, this on many occasions being something in the nature of a compulsion.

Circulatory Conditions in Electroshock Therapy.

G. HOLMBERG, S. THESLEFF, O. VON DARDEL, G. HARD, M. RAMQVIST AND H. PETTERSSON (*Arch. Neurol. & Psychiat.*, July, 1954) state that electroconvulsive therapy can produce a rise in the arterial pressure of 80 to 120 milligrammes of mercury, and the venous pressure sometimes rises as high as 100 milligrammes of mercury or higher. The authors, with the use of a mechanoelectronic transducer manometer, recorded the intraarterial pressure in patients receiving electroconvulsive therapy with and without succinylcholine iodide as a muscle relaxant. The venous pressure was also measured. In the series of eight patients they found that with the use of a muscle relaxant and oxygen it was possible to reduce significantly the strain on the circulatory system caused by electroconvulsive therapy.

Evaluation of Carbon Dioxide Inhalation Therapy.

JOHN D. MORIARTY (*Am. J. Psychiat.*, April, 1954) states that carbon dioxide therapy produces favourable results in a variety of neuroses and psychoneuroses—especially anxiety states, phobic reactions, tension states like spastic colitis and migraine headaches. It is of little value in psychoses and well-established obsessional-compulsive states. Over four years the author has treated a series of 290 patients. The technique was an office room procedure; a mixture of 30% carbon dioxide and 70% oxygen was given to the count of 10, then the quantity of carbon dioxide in the breathing bag was rapidly increased until a satisfactory level of carbon dioxide coma was reached. The author states that abreactions are to be expected and vivid dreams may be useful in the concurrent psychotherapy. In the discussion of this paper it is pointed out that the report is based upon treated patients only, with no formal control series, and so it is difficult to evaluate the results.

Carcinomatous Neuropathy and Myopathy.

R. A. HENSON, DOROTHY S. RUSSELL AND MARCIA WILKINSON (*Brain*, March, 1954) have studied fully the neurological complications resulting from 17 cases of carcinoma of the lung and from one case each of carcinoma in the breast and in the ovary. They state that the clinical features may consist of cerebellar disorders (subacute cerebellar or spino-cerebellar degenerations), sensory disorders (various pictures of polyneuritis) and neuromuscular disorders (muscular wasting and weakness). In three cases lesions in the central nervous system were limited to an extensor plantar response. Lesions may be in the central nervous system or peripheral nerves or both. In seven of the cases the cerebro-spinal fluid was normal. Arrest or remission of the neuropathy was a common finding, but one case ran a steadily progressive course. In 10 cases the clinical courses of the neuropathy and carcinoma were clearly divorced. The authors state that these neuropathies are undoubtedly rare, and it is certain that more than one factor must be concerned in their production. Regarding treatment the use of vitamins is doubtful, but adequate doses of vitamins B_1 and E should be provided. When neostigmine alleviates myasthenic symptoms it is worth while to give it.

Psychiatric Screening in the Armed Forces.

HAROLD M. VOTH (*Am. J. Psychiat.*, April, 1954) writes on the basis of his experiences in the psychiatric screening unit at a United States Marine Corps recruit depot. The purpose of the unit is to exclude mental defectives, psychotics and those with moderately severe character disorders. The recruit fills in a lengthy *questionnaire* designed to give information pointing to psychiatric disorders. A psychiatrist or experienced psychologist spends two to five minutes reviewing the *questionnaire* and interviewing the recruit. If gross pathological disorder is evident the recruit is sent either to full or to trial duty. A further interview takes place in two or three weeks. Approximately 5% to 10% are interviewed a third time with the company commander's report. During these days of heavy induction other recruits are also referred by the company commanders. Those who are considered not suitable for military service are admitted to a psychiatric ward for further observation. Approximately 1·5% to 2·5% of the total incoming recruits are discharged in this way. It is suggested that only the most obviously unfit be rejected for service and that decisions regarding non-psychotics should be based primarily on an adequate trial at duty and only secondarily on history and impressions regarding psychodynamics.

British Medical Association News.

ANNUAL MEETING.

THE annual meeting of the Victorian Branch of the British Medical Association and of the Medical Society of Victoria was held at the Medical Society Hall, Albert Street, East Melbourne, on December 1, 1954, DR. G. RALEIGH WEIGALL, the President, in the chair.

ELECTION OF OFFICE-BEARERS.

The Medical Secretary announced that the Council had elected the following office-bearers:

President: Dr. H. G. Furnell.

Vice-Presidents: Dr. T. G. Swinburne, Dr. A. McCutcheon.

Chairman of Council: Dr. H. C. Colville.

Honorary Secretary: Dr. G. Newman Morris.

Honorary Treasurer: Dr. Leonard Ball.

Honorary Librarian: Dr. J. G. Johnson.

The Medical Secretary announced that the following had been elected members of the Council by the general body of members: Dr. Kevin Brennan, Dr. Grayton Brown, Dr. Charles Byrne, Dr. V. L. Collins, Dr. H. G. Furnell, Dr. K. H. Hallam, Dr. H. G. Hiller, Dr. M. O. Kent Hughes, Dr. H. Maxwell James, Dr. W. E. King, Dr. G. Newman Morris, Dr. K. B. Rank, Dr. Robert Southby, Dr. S. W. Williams.

The Medical Secretary announced that the following had been elected members of the Council by the subdivisions: Dr. W. R. Angus, Dr. Leonard Ball, Dr. D. A. Carter, Dr. N. L. Dodd, Dr. J. E. Dunn, Dr. A. B. Hewitt, Dr. J. G. Johnson, Dr. H. G. Judkins, Dr. D. G. MacKellar, Dr. A. B. McCutcheon, Dr. F. R. Phillips, Dr. Donald Pryde, Dr. M. Robinson, Dr. E. Sandner, Dr. J. J. Searby, Dr. A. J. M. Sinclair, Dr. T. G. Swinburne, Dr. G. R. Weigall.

The Medical Secretary announced that the ex-officio members of the Council were: Dr. H. C. Colville, Dr. F. L. Davies, Sir Victor Hurley, Sir John Newman-Morris, Dr. D. Roseby (Trustees of the Medical Society of Victoria), and the Director for Victoria of the Australasian Medical Publishing Company, Limited, Dr. J. P. Major. A representative of the Victorian Medical Women's Society was Dr. Elizabeth McComas.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council which had been circulated among members was received and adopted on the motion of Sir Peter MacCallum, seconded by Dr. A. B. McCutcheon. The report is as follows:

The Council of the Branch and the Committee of the Society present the seventy-fifth annual report of the Branch and the ninety-ninth of the Society.

Election.

At the annual meeting held last December the following members of the Council and of the Committee were elected: Dr. C. Byrne, Dr. V. L. Collins, Dr. H. G. Furnell, Dr. K. H. Hallam, Dr. H. G. Hiller, Dr. H. M. James, Dr. L. W. Johnston, Dr. M. O. Kent-Hughes, Dr. W. E. King, Sir Peter MacCallum, Dr. G. Newman Morris, Major-General F. Kingsley Norris, Dr. B. K. Rank and Dr. Robert Southby.

The following were elected to represent the subdivisions: Dr. W. R. Angus, Dr. L. H. Ball, Dr. D. A. Carter, Dr. N. L. Dodd, Dr. A. B. Hewitt, Dr. J. G. Johnson, Dr. H. G. Judkins, Dr. A. B. McCutcheon, Dr. D. G. MacKellar, Dr. L. A. Neal, Dr. F. R. Phillips, Dr. Donald Pryde, Dr. C. A. M. Renou, Dr. M. Robinson, Dr. E. Sandner, Dr. J. J. Searby, Dr. G. Swinburne, Dr. G. R. Weigall.

Under Rule 9 of the Branch, Council elected Dr. Elizabeth McComas, who was nominated by the Victorian Medical Women's Society.

The following are ex-officio members: the Trustees of the Medical Society of Victoria, Dr. H. C. Colville, Dr. F. L. Davies, Sir Victor Hurley, Sir John Newman-Morris, Dr. D. Roseby (Sir Victor Hurley having been appointed following the death of Dr. Thomas), and the Director for Victoria of the Australasian Medical Publishing Company, Dr. J. P. Major.

Co-option: Dr. K. Brennan and Dr. J. Grayton Brown were co-opted members of the Council.

The Council elected the following office-bearers:

President: Dr. G. Raleigh Weigall.

Vice-Presidents: Dr. H. G. Furnell and Dr. George Swinburne.

Chairman of Council: Dr. H. C. Colville.

Honorary Treasurer: Dr. Leonard Ball.

Honorary Librarian: Dr. J. G. Johnson.

Honorary Secretary: Dr. M. O. Kent-Hughes.

The Executive consisted of the President and other office-bearers.

Attendances at Council Meetings.

Twelve meetings of the Branch Council were held, the following showing the attendances:

Dr. K. H. Hallam	12	Dr. H. Maxwell James	7
Dr. M. O. Kent-Hughes	12	Dr. L. W. Johnston	7
Dr. Donald Pryde	12	Sir John Newman-Morris	7
Dr. G. Raleigh Weigall	12	Dr. B. K. Rank[1]	7
Dr. Leonard Ball	11	Dr. J. Grayton Brown[4]	6
Dr. Charles Byrne	11	Sir Victor Hurley[3]	6
Dr. H. C. Colville	11	Dr. W. E. King	6
Dr. F. L. Davies	11	Maj.-Gen. F. Kingsley-Norris	6
Dr. N. L. Dodd	11	Dr. C. A. M. Renou[1]	6
Dr. H. G. Furnell	11	Dr. A. B. McCutcheon[1]	5
Dr. J. G. Johnson	11	Dr. M. Robinson	5
Dr. Elizabeth McComas	11	Dr. W. R. Angus (also represented by substitute at two meetings)	3
Dr. Robert Southby	11	Dr. A. B. Hewitt	3
Dr. T. G. Swinburne	10	Dr. D. G. McKellar	3
Dr. V. L. Collins	9	Dr. J. J. Searby	3
Dr. J. P. Major	9	Sir Peter MacCallum	2
Dr. G. Newman Morris	9	Dr. Leo Neal	0
Dr. F. R. Phillips	9	Dr. Douglas Thomas[2]	0
Dr. D. Roseby	9		
Dr. E. Sandner	9		
Dr. H. G. Judkins	8		
Dr. Kevin Brennan[4]	7		
Dr. D. A. Carter	7		
Dr. H. G. Hiller	7		

The highest attendance at any one meeting was 31, and the average attendance was 27.

Appointment of Subcommittees.

The following subcommittees were appointed by Council at the beginning of the year (the first named acting as convener of the subcommittee):

Ethics: Dr. Major, Dr. Davies, Sir John Newman-Morris, Dr. McCutcheon, Dr. Roseby and the Executive.

Finance, House and Library: Dr. Ball, Dr. Furnell, Dr. Gavin Johnson and Major-General Norris.

Legislative: Dr. Davies, Dr. Colville, Dr. Rank, Dr. Renou and Dr. Byrne.

Organization: Dr. Swinburne, Dr. Ball, Dr. Brennan, Dr. Byrne, Dr. Colville, Dr. Dodd, Dr. Furnell, Dr. J. G. Johnson, Dr. Judkins, Dr. L. W. Johnston, Dr. Kent-Hughes, Dr. McComas, Dr. McCutcheon, Dr. Neal, Dr. Pryde, Dr. Rank, Dr. Renou, Dr. Roseby, Dr. Southby, Dr. Weigall and representatives of the country subdivisions.

Science: Sir Peter MacCallum, Dr. Hallam, Dr. L. W. Johnston, Dr. King, Major-General Norris and Dr. Collins.

Hospital: Dr. Southby, Dr. Ball, Dr. Brennan, Dr. Grayton Brown, Dr. Collins, Dr. Colville, Dr. Hallam, Dr. James, Dr. Kent-Hughes, Dr. King, Dr. G. Newman Morris, Dr. Neal, Dr. Rank and Dr. Weigall.

Correspondence: Dr. Colville and Dr. Kent-Hughes.

Workers' Compensation: Dr. Ball, Dr. Grayton Brown, Dr. Byrne, Dr. Colville, Dr. Kent-Hughes, Dr. Rank, Dr. Renou and Dr. Roseby.

Publicity: Dr. Ball, Dr. Byrne, Dr. Swinburne and the Medical Secretary.

Building: The President, Honorary Treasurer, Honorary Secretary and Dr. Coates and Dr. Furnell.

Social: Dr. Renou, Dr. Roseby and Dr. Swinburne.

Appointments and Nominations.

Anti-Cancer Council of Victoria: Dr. J. E. Clarke and Dr. H. Searby.

Anti-Cancer Council, Medical and Scientific Committee of: Sir Victor Hurley.

Australian Aerial Medical Service: Sir John Newman-Morris.

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[1] Granted leave of absence during the year.

[2] Died in January.

[3] Appointed in February.

[4] Co-opted at the second meeting for the year.

Australian and New Zealand Association for the Advancement of Science: Thirtieth Meeting, Canberra, 1954—Sir Peter MacCallum.

British Medical Association Annual Representative Meeting, Glasgow, 1954: Dr. Lucy Bryce, Dr. Alan McCutcheon and Dr. Frank May.

British Medical Association, Central Council: Dr. M. L. Formby.

British Medical Association in Australia, Federal Council: Dr. Charles Byrne, Dr. H. C. Colville and Dr. Robert Southby.

"British Medical Journal", Victorian Correspondent: Dr. H. G. Hiller.

British Medical Agency of Victoria Proprietary, Limited: Directors—Dr. Leonard Ball, Dr. C. H. Dickson, Major-General F. Kingsley Norris and Dr. G. S. Robinson.

British Medical Insurance Company of Victoria, Limited: Directors—Sir John Newman-Morris (chairman), Dr. C. H. Dickson, Dr. H. G. Furnell, Sir Victor Hurley, Dr. W. W. S. Johnston and Major-General F. Kingsley Norris.

Central Medical Library Committee: Dr. J. G. Johnson.

Conjoint Committee with the Friendly Societies Association of Victoria: Dr. Charles Byrne, Dr. C. H. Dickson and Dr. J. G. Johnson.

Consultative Council on Influenza: Dr. K. D. Fairley.

Consultative Council on Quarantinable Diseases: Dr. P. Gilbert.

Consultative Council on Maternal Mortality: Dr. J. G. Johnson.

Complaints Committee: Dr. F. L. Davies, Dr. H. G. Judkins, Dr. A. B. McCutcheon, Dr. G. Newman Morris and Dr. D. Roseby.

Dietetic Association of Victoria: Dr. T. A. F. Heale.

Federal Medical War Relief Fund Advisory Committee: Dr. F. L. Davies, Dr. H. G. Furnell and Dr. W. G. D. Upjohn.

Fellowship of Christian Healing: Dr. A. Murray Clarke, Dr. Arthur J. Day, Dr. J. G. Johnson, Dr. H. G. Judkins, Dr. R. Southby and Professor Lance Townsend.

Free Kindergarten Union: Dr. H. Boyd Graham.

Fluoridation of Water Supplies, Advisory Panel to Health Department: Dr. L. P. Wait.

Health (Proprietary Medicines) Act, Advisory Committee under the Provisions of: Dr. Byron L. Stanton.

Hospital Benefits Association of Victoria: Dr. C. H. Dickson, Major-General F. K. Norris, Dr. G. Newman Morris and Dr. G. R. Weigall.

Hospital Benefits Association of Victoria, Medical Advisory Subcommittee: Dr. M. O. Kent-Hughes and Dr. C. A. M. Renou.

Joint Insurance Adjudication Committee: Dr. L. H. Ball, Dr. D. Roseby and Dr. W. G. D. Upjohn.

Library Advisory Committee: Dr. B. Gandevia, Dr. T. A. F. Heale, Dr. T. H. Hurley, Dr. R. S. Lawson and Dr. C. Macdonald.

Lord Mayor's Fund: Sir John Newman-Morris.

Lord Mayor's Country Children's Holiday Camp, Committee of: Dr. Gwynne Villiers.

Masseurs' Registration Board: Dr. C. Hembrow and Dr. Leigh T. Wedlick.

Medical Officers' Relief Fund (Federal), Advisory Committee: Dr. F. L. Davies, Dr. H. G. Furnell and Dr. W. G. D. Upjohn.

"The Medical Journal of Australia", Victorian Correspondent: Dr. H. G. Hiller.

Medical Society of Victoria, Trustees of: Sir John Newman-Morris, Dr. H. C. Colville, Dr. F. L. Davies, Dr. D. Roseby and Sir Victor Hurley.

Medico-Pharmaceutical Liaison Committee: Dr. W. E. King, Dr. D. Roseby, Dr. Byron Stanton, the President (ex-officia) and the Medical Secretary.

Melbourne Permanent Post-Graduate Committee: Sir Peter MacCallum, Dr. J. P. Major and Dr. G. R. Weigall.

Museum of the Medical Society of Victoria: Curator, Dr. B. Gandevia; Assistant Curator, Dr. H. Boyd Graham.

National Committee of British Commonwealth Collection of Microorganisms: Professor S. D. Rubbo.

National Safety Council of Australia: Dr. Kevin Brennan.

Nurses' Board: Dr. W. M. Lemmon and Dr. I. G. McLean.

The Occupational Therapy School of Victoria: Dr. D. O. Longmuir.

Olympic Games: Honorary Medical Director, XVIth Olympiad: Dr. H. G. Furnell.

Opticians' Registration Board: Dr. T. a'B. Travers and Dr. John Bignell (appointed following the death of Dr. S. R. Gerstman).

Pensioner Medical Service: Committee of Inquiry: Sir Victor Hurley, Dr. C. Byrne, Dr. H. C. Colville and Dr. J. G. Johnson.

Red Cross Blood Transfusion Service, Advisory Subcommittee: Dr. Charles Byrne.

Rotary Club (Citizens' Committee): The President of the Branch.

Services Recognition Fund: Dr. A. E. Coates, Dr. H. G. Furnell and Major-General F. Kingsley Norris.

Society for Crippled Children: Dr. H. Boyd Graham.

Standards Association of Australia: Dr. D. O. Shiels.

Standards Association of Australia: Committee on Standard Measuring Cups and Spoons: Dr. T. A. F. Heale.

Standards Association of Australia: Sectional Committee on Industrial Respiratory Protective Devices (Victorian Section): Dr. D. L. G. Thomas.

Standards Association of Australia: Dental Materials Sectional Committee, Victorian Subcommittee on Biological Products: Dr. W. E. Fleming.

Standards Association of Australia (Victorian Division): Committee on Hospital Furnishings and Equipment: Dr. J. H. Lindell.

State Medical Planning Committee: Dr. H. G. Furnell.

Victorian Baby Health Centres' Association: Dr. M. L. Powell.

Victorian Bush Nursing Association: Dr. E. McComas.

Victorian Council of Speech Therapy: Dr. Robert Southby.

Victorian Documentary Film Council: Advisory Committee on Scientific Films: Dr. Morris Davis and Dr. R. S. Hooper.

World Medical Association Supporting Committee (Victoria): Dr. D. Roseby, Dr. K. H. Hallam and Sir Peter MacCallum.

Branch Convocation.

The following were elected for the year 1954. *Melbourne Central*: Dr. C. J. O. Brown, Dr. J. E. Clarke, Dr. E. E. Dunlop, Dr. C. H. Fitts, Dr. J. L. Frew, Dr. H. Boyd Graham, Dr. R. S. Lawson, Dr. Kate Mackay, Dr. J. O'Sullivan, Dr. G. Penington, Dr. S. Reid, Dr. J. E. Sewell, Dr. G. Springthorpe, Dr. G. M. Tallent, Dr. Stanley Williams. *Eastern Suburban*: Dr. R. D. Bartram, Dr. J. Begg, Dr. C. Biggs, Dr. T. F. Buxton, Dr. W. Carrington, Dr. A. S. Ferguson, Dr. W. E. Hewitt, Dr. C. Lancaster, Dr. J. G. McMahon, Dr. R. G. Penington, Dr. W. R. Rigg, Dr. J. G. Simpson. *Northern Suburban*: Dr. J. E. Dunn, Dr. R. Gurry, Dr. D. C. Lear, Dr. A. B. Swain, Dr. H. R. Walker, Dr. I. A. Wilson, Dr. I. D. Wilson. *North-Eastern Suburban*: Dr. M. Ashkenasy, Dr. J. Cockerill, Dr. W. Heslop, Dr. C. F. MacGillicuddy. *Southern Suburban*: Dr. J. H. Brody, Dr. L. Middleton, Dr. T. O. Sayle, Dr. R. S. Smibert, Dr. N. L. Speirs, Dr. H. F. Tucker. *South Central Suburban*: Dr. P. C. B. Bradley, Dr. D. J. M. Dunn, Dr. E. A. C. Farran, Dr. Q. J. Whitehead, Dr. C. W. Wilson, Dr. R. D. Wilson. *South-Eastern Suburban*: Dr. J. F. Adamson, Dr. J. F. Akeroyd, Dr. V. C. Brown, Dr. C. C. Dyte, Dr. G. Foreman, Dr. E. Kirsner, Dr. G. L. Lillies, Dr. L. Nicholson, Dr. G. W. Patterson, Dr. R. M. Shaw. *Western Suburban*: Dr. D. D. Coutts, Dr. A. H. Green, Dr. L. Gurry, Dr. L. Joel, Dr. R. J. Long. *Ballarat*: Dr. G. R. Davidson, Dr. W. R. Griffiths, Dr. D. B. Skewes. *Bendigo*: Dr. N. Harrington, Dr. W. J. Long, Dr. A. Newson. *Geelong*: Dr. R. L. Fulton, Dr. D. A. Kidd, Dr. K. Langlands. *Gippsland*: Dr. Alan Crook, Dr. W. F. Ferguson, Dr. J. Gooch. *Goulburn*: Dr. J. B. McMiken, Dr. R. O. Mills. *North-Eastern Country*: Dr. H. A. Marks, Dr. M. Rohan. *North-Western Country*: Dr. G. Forsyth, Dr. S. Rabl, Dr. T. Walpole. *South-Western Country*: Dr. A. E. Brauer, Dr. G. Watson.

Membership Roll.

The number of members on the roll at October 19, 1954, was 2656, which was 146 more than last year. Two hundred and eighty-five members were added (162 by election, 37 were reinstated by payment of arrears, and 86 were transferred from other States and overseas) and 134 names were removed (21 by death, 52 by transfer, 16 by resignation, and 45 allowed their subscriptions to fall into arrears).

Honorary medical members number 35, and there are two complimentary members.

Honorary student associates number 43.

Deceased.

The death of the following members and former members occurred during the year and is recorded with regret: Dr. Mark Ashkenasy, Dr. J. W. L. Atkinson, Dr. J. F. Bartley, Dr. D. D. Cade, Dr. L. J. Clendinnen, Dr. J. G. B. Cooper, Dr. J. H. L. Cumpston, Dr. F. A. Day, Dr. G. W. Deravin, Dr. Dudley Edwards, Dr. G. R. Felstead, Dr. J. P. Fogarty, Dr. R. G. Fox, Dr. S. R. Gerstman, Dr. W. R. S. Gray, Dr. T. S. Greenaway, Dr. O. K. Hartridge, Dr. T. Garnet Leary, Dr. C. C. Macknight, Dr. K. J. Macleod, Dr. F. F. McMahon, Dr. C. Maxwell, Dr. J. H. Niall, Dr. A. R. Phillips, Dr. H. D. Phipps, Dr. G. D. Praagst, Dr. Allen Robertson, Dr. Paul Rowan, Dr. F. V. G. Scholes, Dr. C. E. Stewart, Dr. Dorothy Synan, Dr. Douglas Thomas, Dr. J. L. Thwaites, Dr. C. E. Willing, Dr. F. Wood Jones.

Following the death of Dr. Douglas Thomas in January, the Branch Council recorded the following special minute in his memory:

> It is with very great regret that the Council of the Victorian Branch of the British Medical Association records the death of Douglas John Thomas, M.D., B.S., D.M.R. (R.C.P. and S.), M.R.C.P., F.R.A.C.P., who was a member of the Council from 1938 to 1954, occupying successively the positions of Honorary Secretary, Honorary Librarian, President and Treasurer, and who, at the time of his death, was a trustee of the Medical Society of Victoria.
>
> His services to the Victorian Branch of the British Medical Association and to the Medical Society of Victoria were only part of the activities of one whose life was devoted to service—to his country in two wars, to his church throughout his life, and to the practice of medicine, of which he was a distinguished exponent.
>
> Council extends its sympathy to Mrs. Thomas, her son and daughter.

Mrs. Kelson, who was caretaker of the Medical Society of Victoria for over twenty-five years and was well known to members of the Branch, died in April, 1954.

Remembrance Day.

On Thursday, November 11, 1954, a short ceremony was held in the foyer of the Medical Society Hall in honour of the Victorian medical officers who lost their lives in the service of the Commonwealth in the wars of 1914-1918 and 1939-1945. Following the reading of the names of those who had been killed or had died on service, the President laid a wreath on the War Memorial.

Church Services.

The fifth annual church services for the medical profession were held on Sunday, February 14, 1954, and were well attended. Members assembled in the precincts of the cathedrals and entered in procession.

At St. Paul's Cathedral the preacher was the Bishop of Geelong, the Right Reverend J. D. McKie, M.A., Th.Soc., and the President, Dr. G. Raleigh Weigall, read the First Lesson and Dr. George Swinburne (Vice-President) the Second Lesson.

At St. Patrick's Cathedral the Right Reverend J. H. Hannan, D.D., Ph.D., was the preacher.

For the first time medical students were invited to attend the services.

The Stawell Memorial Prize, 1953.

No entries were received for the Stawell Prize Essay for 1953, the subject for which was "Use and Abuse of Antibiotics".

Congratulations.

During the year Council had pleasure in congratulating the following: Dr. Kate Campbell, C.B.E., Dr. A. J. Metcalfe, C.B.E., Surgeon Captain Alwynne Rowlands, O.B.E., as recipients of honours conferred upon them by Her Majesty Queen Elizabeth II; Sir Charles Dodds (London), Sir Alexander Murphy (Brisbane), Sir Herbert Schlink (Sydney), Sir Brian Swift (Adelaide), and Sir Harry Wunderley (Canberra) on being created Knights Bachelor; and Dr. Bryan Gandevia as winner of the Bertram Armytage Prize.

Golf.

The fifteenth annual golf tournament of the Branch was held on Thursday, November 26, 1953, on the east course of the Royal Melbourne Golf Club. Dr. R. Munro won the Weigall Cup (championship), and the Roseby Cup (handicap) was won by Dr. H. F. Tucker. The spoon competition was won by Dr. H. Jackson and Dr. H. F. Tucker.

Entertainment.

The graduates for 1953 were entertained at afternoon tea by the Branch Council in the library and council room following their registration on Monday, December 21, and the supplementary graduates were entertained following their registration on Tuesday, April 13, 1954.

During their meeting in Melbourne in March the Branch Council entertained members of the Federal Council to dinner at the Union House, University of Melbourne.

Following the delivery of his final lecture in Melbourne, Professor E. B. Astwood, of Boston, United States of America, who gave a series of lectures in Australia under the auspices of the Australian Post-Graduate Federation, was entertained by the President at a small informal supper party held in the Council Room of the Medical Society Hall. Similar hospitality was enjoyed after the delivery of the Embley Memorial Lecture by Dr. Gilbert Troup, of Perth, in August.

On November 16 the President and Mrs. Weigall entertained members of the Branch Council and their wives, and office-bearers of other organizations, at a buffet dinner at the Union House, University of Melbourne.

Meetings of the Branch.

The following meetings of the Branch were held in Melbourne:

February: The Medical Secretary, Dr. C. H. Dickson, reported on his visit overseas in 1953.

April: The fourth R. H. Fetherston Memorial Lecture, "Obstetrics Today and Yesterday", was delivered by Professor Lance Townsend.

June: A symposium on "Emphysema", at which Dr. Kenneth McLean spoke on the pathology of the disease, Dr. T. H. Steel on the medical aspect and Dr. John Hayward on the surgical aspect.

August: The eighth Embley Memorial Lecture, "Some Current Problems in Anæsthesia", was delivered by Dr. Gilbert Troup, of Perth.

October: The twenty-first Sir Richard Stawell Oration, "The Professions in Our National Life", was delivered by Dr. Charles G. McDonald, F.R.A.C.P., Deputy Chancellor of the University of Sydney.

The following clinical meetings and demonstrations were held:

March: Prince Henry's Hospital.

May: Alfred Hospital; Receiving House, Royal Park.

June: Department of Bacteriology, University of Melbourne.

July: Saint Vincent's Hospital.

September: Department of Pathology, University of Melbourne.

November: The Royal Children's Hospital.

The following meetings were held in the country:

May: Horsham. Clinical cases were presented at the Wimmera Base Hospital in the afternoon, and in the evening Dr. I. H. Cuming gave a lecture entitled "The Pre-Operative and Post-Operative Use of Intravenous Fluids".

July: Yallourn. Demonstration of clinical cases at the Latrobe Valley Community Hospital in the afternoon and at night a talk by Dr. James S. Peters on "Mechanism of Kidney Function in Health and Disease", supplemented by the Lilly Laboratory colour-sound film on the subject.

November: Mooroopna. Demonstration of clinical cases at the Mooroopna Base Hospital in the afternoon. In the evening a lecture was given by Dr. S. F. Reid on "The Evaluation of Abdominal Pain with Special Reference to Pain in the Upper Abdomen".

Also in November, at the invitation of the Director-General of Medical Services, a meeting was held at the Royal Australian School of Army Health, Healesville.

The Branch Council wishes to express its appreciation and thanks to the committees and honorary secretaries of country subdivisions for arranging the country meetings, to the wives of members of the subdivisions for their hospitality to visiting members and their wives, and to the committees and matrons of base hospitals for the provision of facilities.

The Branch Council also thanks the staffs of Prince Henry's Hospital, the Alfred Hospital, Saint Vincent's Hospital, the Royal Children's Hospital, of the Bacteriology and Pathology Departments of the University and the Receiving House, Royal Park, as well as the Director-General of Medical Services, R.A.A.M.C., and the staff of the Royal Australian School of Army Health. The arrangements

made for the various meetings were excellent and members were very appreciative of both the educational and social aspects of the meetings.

Business of Council.

The Royal Visit.

The year 1954 was memorable because of the visit to Australia of Her Majesty Queen Elizabeth II and His Royal Highness the Duke of Edinburgh, and a message of loyalty and devotion was forwarded by the President to His Excellency the Governor of Victoria for transmission to Her Majesty, who is the Patron of the British Medical Association. This message was graciously acknowledged by Her Majesty.

National Health Service.

All sections of the *National Health Act*, 1953, have now been proclaimed and national health services—the Pensioner Medical Service, the provision of medical benefits, hospital benefits and pharmaceutical benefits—are controlled by that legislation.

During the year new regulations governing the provision of pharmaceutical benefits were promulgated without reference to the medical profession and strong protests against this action and certain of those regulations were made to the Federal Government.

The conditions under which many additional thousands of persons will be provided with a medical service, as they become entitled to old-age pensions following the liberalization of the means test, is engaging the attention of the Branch Council, and negotiations between the Federal Council and the Commonwealth Government are in progress.

More than half the population of Victoria is now covered by the medical benefits scheme, and the benefit organizations, having overcome their initial difficulties, are now able to meet claims with reasonable promptitude. Members have been asked to assist the organizations by supplying sufficient information on account forms to enable a contributor's entitlement to refund to be determined expeditiously.

Conduct of Medical Practice.

During the year members were reminded by a special circular of their obligations to the public and their colleagues, particularly in relation to the availability of medical service and in an endeavour to remove grounds for complaints by members of the public, meetings of subdivisions were held at which members were urged to establish rosters for night and week-end duty, and in the present issue of the telephone directory a special classified list of suburban doctors is published in the pink pages.

Council established a Complaints Committee during the year, to which, when appropriate, complaints received in the Branch Office will be referred for consideration.

Medical Needs of the Community.

The limitation imposed on the entry of students to the Medical School of the University of Melbourne and the effects which may follow that policy led to the appointment during the year of a committee, *ad hoc*, to investigate and report on the number of medical practitioners required for the community. Since its inception the committee, of which the Dean of the Faculty of Medicine is a member, has been obtaining factual information.

Hospitals and Charities Commission.

The Branch Council approved proposals adopted by the Hospitals and Charities Commission in reference to the keeping of hospital records which had been recommended by the Advisory Council.

Proposals for the "Regional Planning" of hospital services in Victoria have also been discussed with the chairman of the commission.

Visiting Staffs, Public Hospitals.

During the year Council resolved:

That the visiting staff of a suburban hospital should be classified, graded and remunerated in the following manner:

In-patient appointees, £10 10s. per session. Out-patient appointees, £8 8s. per session. First assistants, with senior degrees, £6 6s. per session. Second assistants, £4 4s. to £5 5s. per session.

Sessional payments should be translated to annual salaries, allowing four weeks' annual leave, provision being made for sick leave—for example, one week of cumulative sick leave for every year of service.

Admission to Mental Hospitals.

A document, prepared by the chairman of the Mental Hygiene Authority and dealing with the legal provisions in relation to certification under the *Lunacy Acts*, was circulated to members.

Notices to Members.

During the year the format of the monthly notice paper was altered and it is now being printed—a change which has met with general approval.

Matters of importance brought to the notice of members during the year included advice in reference to blood grouping from the Consultative Council on Maternal Mortality; exclusion clauses in contracts; fees payable to *locum tenentes*; and the holding of shares in drug companies (it being the opinion of Council that it was improper for a member to be influenced in his prescribing by the holding of shares in a drug company).

State Legislation.

Council noted during the year the passage of:

1. An amendment to the *Medical Acts* restoring reciprocity with Great Britain, which had ceased following the proclamation of the *Medical Act*, 1951, which made one year's residence in hospital a prerequisite to registration in Great Britain.

2. The *Corneal Grafting Act*, permitting persons during life to direct that their eyes be used for therapeutic purposes after their death.

Workers' Compensation.

Discussions took place during the year with the Fire and Accident Underwriters' Association of Victoria in reference to a new schedule of fees applicable to the treatment of injured workers, but it was not possible to reach agreement.

Alteration of Rules of the Branch.

As the subscription of junior members was substantially less than the fixed commitments in relation to each member, the junior subscription rate will be increased to £5 5s. in 1955.

Council has also approved for submission to a meeting of the Branch the following new rule: "The statement of specialty (such as X ray, etc.) may be put on nameplates only if that specialty constitutes the sole practice of the doctor."

Portrait of the Late Dr. C. H. Mollison.

The portrait of Dr. Mollison, who was Treasurer of the Medical Society of Victoria for over fifty years, now hangs in the Council Room.

Gifts by the British Medical Insurance Company.

During the year, in addition to its regular monthly contributions to the funds of the Branch, the directors of the British Medical Insurance Company presented a 35-millimetre projector to the Branch, made a special grant to meet the costs of the museum, and redeemed for the sum of £500 debentures to the face value of £750 issued by the Medical Society of Victoria. Council expresses its appreciation of the company's generosity.

Appointment of Assistant Secretary.

The Council felt it appropriate at its October meeting to show its appreciation of Miss Corley's increased work and responsibility in the office by creating the position of Assistant Secretary, to which she has been appointed.

Many other matters have been dealt with by both the Branch Council and the Executive in addition to the above. A great deal of business arising from the activities of the Federal Council has not been mentioned here, as full reports of the meetings of the Federal Council appear in THE MEDICAL JOURNAL OF AUSTRALIA.

Federal Council.

The Federal Council met three times during the year, in March in Melbourne and in Brisbane at the end of August, and on October 28 a special meeting took place in Canberra for the purpose of discussing the future of the Pensioner Medical Service with the Prime Minister. During both the ordinary meetings conferences were held with the Minister for Health, and the President and General Secretary of the Federal Council were granted an interview with the Prime Minister on September 9.

Full reports of the proceedings of the Melbourne and Brisbane meetings have been published in the issues of THE MEDICAL JOURNAL OF AUSTRALIA of April 17 (page 611) and October 16 (page 640).

The Library of the Medical Society of Victoria.

During the year 109 new books were added to the library, including a complete set of Year Books. In addition 20 books have been borrowed from H. K. Lewis and Company (Medical and Scientific Library), of London, and are available for loan to members. Subscriptions have been taken out for *Abstracts of World Medicine, Geriatrics, Obstetrics and Gynæcology, Journal of Gerontology* and *Annals of the Rheumatic Diseases.*

A Library Advisory Committee was appointed in July to advise the Honorary Librarian on library policy and management, and so ensure continuity of library management in the event of a change of Honorary Librarian.

Following an arrangement with the Eye and Ear Hospital an expert photocopying service is now available to members and affords them the opportunity of obtaining permanent copies of journal and text-book references.

The Branch Council records its appreciation of the generosity of the British Medical Insurance Company of Victoria, Limited, THE MEDICAL JOURNAL OF AUSTRALIA and *The Australian and New Zealand General Practitioner*, all of whom have increased our holdings of books and journals. We are also indebted to Dr. J. A. D. Nish, Dr. I. Thomas, Dr. W. G. D. Upjohn, Dr. M. Green, Dr. B. Gandevia and all members who have so generously donated journals, which are now in this library or in several more recently established libraries. The Karolinska Institutets Bibliotek, Stockholm, has supplied various supplements to the Scandinavia Acta periodicals.

J. G. JOHNSON,
Honorary Librarian.

Museum.

The allocation of a room to the Museum has proved a valuable stimulus in the work necessary to place the Museum upon a sound basis and to ensure that it becomes of practical value. During the year approximately 1000 letters and documents, relating chiefly to the activities of the Medical Society in the last century, have been filed, and a detailed index made available for reference. It is a pleasure to record that as a result it has been possible to provide several members with information and original material not otherwise obtainable. Several hundred items have yet to be classified. In conjunction with the Section of Medical History, a colection of reprints of papers on Australian medical history and on general medical history by Australian authors has been commenced. About 80 papers have so far been listed. The inclusion in the card index of persons, institutions and major subjects referred to in each paper greatly adds to the value of the collection for research purposes. A request for reprints is now sent to authors of appropriate articles as they are published, but assistance in obtaining copies of earlier papers, either as reprints or journal issues, would be appreciated. Some work has also been done on the identification and classification of early medical and surgical instruments.

During the year Dr. H. Boyd Graham resigned as curator in order that Dr. Bryan Gandevia might hold that office while abroad; it is hoped that arrangements can be made for him to study overseas medical museums. During his absence the duties of curator will continue to be performed by Dr. Boyd Graham.

Grateful acknowledgement is made of a number of gifts, chiefly of reprints and documents, presented to the Museum through the Section of Medical History, and of donations by Dr. F. Williams, Dr. J. M. Baxter and Dr. J. H. W. Birrell, Mrs. C. H. Mollison and Mrs. N. Gregson.

BRYAN GANDEVIA,
Honorary Curator.

Reports of Subdivisions.

Metropolitan.

Melbourne Central: Office-bearers—Council representatives, Dr. Leonard Ball, Dr. C. A. M. Renou and Dr. T. G. Swinburne; President, Dr. A. E. Coates; Honorary Secretary, Dr. T. G. Swinburne.

There were no meetings of the Melbourne Central Subdivision during the last twelve months. A number of matters were, however, brought up in Council at the request of members of the subdivision.

T. G. SWINBURNE,
Honorary Secretary.

South Central Suburban: Office-bearers—Council representative, Dr. J. G. Johnson; President, Dr. E. A. C. Farran; Honorary Secretary, Dr. R. D. Wilson.

Two meetings were held during the year.

The first meeting was held at the home of Dr. Farran on November 18, 1953. Dr. Johnson addressed the meeting on the method of rendering accounts and receipts in the new medical scheme. Two resolutions were passed, these being:

1. This meeting suggests to the Council of the Branch that an emergency medical service be organized by rostering doctors who are willing to serve, and suggests that there be one central organization and the telephone number be published.
2. That this meeting views with concern the increased relaxation of the means test in regard to the remuneration in the Pensioner Medical Service.

The second meeting of the year was held in the auxiliary room of the Alfred Hospital on July 10, 1954. The main topic was a discussion on the resolutions passed by the conjoint meeting of subdivisional secretaries and representatives. Resolutions passed at this meeting were:

1. That a letter be sent to the Medical Secretary, stating that there was no justifiable reason for establishing an emergency roster system and suggesting that if any money be spent, it be in a publicity campaign.
2. That the Branch appoint a public relations officer for this State, his duties to include dissemination of information to medical practitioners.
3. That the Branch should unite to take the strongest possible action to enable prescriptions under the Pharmaceutical Benefits Scheme and the Pensioner Medical Service to be written in conformity with the usual methods of prescribing.
4. That the Branch consider the advisability of restraining medical agents from publishing financial details of practices in the public Press.

R. D. WILSON,
Honorary Secretary.

Western: Office-bearers—Council representative, Dr. N. L. Dodd; President, Dr. M. H. Box; Honorary Secretary, Dr. D. D. Coutts.

During the year Dr. M. H. Box resigned from the Council of the Branch, after having represented the subdivision for the past twenty years. The Honorary Secretary made an appeal to the members for funds to provide some token of appreciation for the services rendered by Dr. Box to the subdivision and a meeting was held at the Williamstown and District General Hospital on Sunday, December 12, 1953, for the purpose of presenting him with an armchair. The presentation was made by the Honorary Secretary and several members spoke of the valued service rendered by Dr. Box as the subdivision's representative on the Branch Council.

Another meeting of the subdivision was held at the Mechanics Institute, Footscray, on July 15, 1954, to discuss the institution of a roster system. The meeting agreed to the principle of an emergency roster and suggested an alteration in the setting up of the medical section of the pink pages of the telephone directory.

D. D. COUTTS,
Honorary Secretary.

Eastern: Office-bearers—Branch Council representative, Dr. H. G. Judkins; Chairman, Dr. L. Kirsner; Honorary Secretary, Dr. H. J. Hosking.

One meeting of the subdivision was held during the year, on July 9, at which Mr. John Woodward spoke on "The Problem of Sciatica". Forty-two members attended and Mr. Woodward's paper was followed by a discussion on measures to obviate the complaints referred to in the Branch Council's circular letter of May 5. It was resolved to submit the following proposals to the Council:

1. That an emergency call service be instituted through the services of the doctor's call service or some such similar organization approved by the Branch.
2. That an application be made to have the telephone number of the emergency call service inserted in the front page of the telephone directory.
3. That a voluntary local roster system be instituted among members of the various subdivisions for answering emergency calls.

H. J. HOSKING,
Honorary Secretary.

Southern: Office-bearers—Branch Council representative, Dr. G. R. Weigall; Chairman, Dr. D. Zacharin; Honorary Secretary, Dr. A. O. Rosenhain.

Following the election of office-bearers the meeting discussed the recent critical publicity in the Press in regard

to lack of attendance. The institution of a roster system in some form was considered to be a means of overcoming the difficulty. A resolution on these lines was passed by the meeting.

A. O. ROSENHAIN,
Honorary Secretary.

Country.

Goulburn: Office-bearers—Branch Council representative, Dr. D. G. MacKellar; substitute representatives, Dr. D. Lally and Dr. R. O. Mills; Chairman, Dr. A. E. Dickmann; Honorary Secretary, Dr. Brian Schloeffel; Honorary Treasurer, Dr. A. F. Taylor.

Two post-graduate week-end meetings were arranged in conjunction with the Melbourne Permanent Post-Graduate Committee during the year. For the first time in eight years lectures were held only on Saturday afternoons at the Mooroopna Base Hospital, and this new departure resulted in larger attendances on each occasion.

The first meeting was on March 20, when the following lectures were given: Mr. Russell Howard: "Acute Surgical Emergencies in Children". Dr. Keith Fairley: "Recent Advances in Endocrinology."

At the second meeting on July 17 the following lectures were given: Mr. R. S. Hooper: "Intracranial Hæmorrhage." Dr. Keith Bowden: "Practical Medico-Legal Problems in General Practice."

Most successful buffet dinners were arranged in the resident medical officers' quarters at the conclusion of each lecture series.

BRIAN SCHLOEFFEL,
Honorary Secretary.

Bendigo: Office-bearers—Branch Council representative, Dr. E. Sandner; substitute representatives, Dr. H. Leggo and Dr. T. Jenkins; President, Dr. E. Sandner; Vice-President, Dr. W. Rosenthal; Honorary Secretary, Dr. A. J. Walters; Honorary Treasurer, Dr. P. Kirby.

During the past year the subdivision held two one-day post-graduate meetings, in October and May, which aroused considerable interest and were fairly well attended. On each occasion the lecturers were entertained to dinner after the meeting.

A. J. WALTERS,
Honorary Secretary.

North-Western Country: Office-bearers—Council representative, Dr. J. J. Searby; substitute representatives, Dr. G. Forsyth and Dr. B. Hutton-Jones; Chairman, Dr. G. Forsyth; Honorary Secretary, Dr. A. L. Bridge.

A well-attended post-graduate meeting was conducted at Warracknabeal on March 27, 1954. Guest speakers were Dr. E. E. Dunlop, Dr. Bruce Anderson and Dr. Maurice Clarke.

On May 1, 1954, a Branch meeting was held at Horsham. During the afternoon a series of cases with cystic lung pathology was demonstrated. This demonstration was followed by a cocktail party and dinner at the Locarno Hotel. During the evening the Branch President, Dr. G. R. Weigall, spoke briefly on the regional scheme of medical services proposed by the Hospitals and Charities Commission, and at night Dr. I. H. Cuming spoke on the use of intravenous fluids.

ALAN BRIDGE,
Honorary Secretary.

Ballarat: Office-bearers—Branch Council representative, Dr. M. Robinson; substitute representatives, Dr. G. T. James and Dr. G. A. Alexander; President, Dr. G. R. Davidson; Vice-President, Dr. G. Pern; Honorary Secretary, Dr. J. P. L. Griffiths; Honorary Treasurer, Dr. P. G. Smith; local council, Dr. W. R. Griffiths, Dr. M. Robinson, Dr. W. L. Sloss, Dr. E. R. G. Sheil and Dr. W. T. Greening.

The subdivision has held four Council meetings and two general meetings during the year.

A Branch meeting was held in November, 1953, and was a very pleasurable occasion for the subdivision. Four post-graduate lectures were held and were well attended.

J. P. L. GRIFFITHS,
Honorary Secretary.

Geelong: Office-bearers—Branch Council representative, Dr. D. A. Carter; substitute representatives, Dr. H. Millikan and Dr. D. A. Kidd; Chairman, Dr. J. M. Agar; Vice-Chairman, Dr. A. R. Moreton; Honorary Secretary, Dr. David C. Wallace; Treasurer, Dr. E. I. Fargie; Librarian, Dr. Mary DeGaris; Library Subcommittee, Dr. J. M. Agar, Dr. C. W. Gale and Dr. J. P. Robinson.

At a meeting held on September 21, 1954, the following office-bearers were elected for the ensuing year: Council representative and Advisory Board representative, Dr. D. A. Carter; President, Dr. A. R. Moreton; Vice-President, Dr. H. Millikan; Secretary, Dr. J. P. Robinson; Treasurer, Dr. E. I. Fargie; Librarian, Dr. Mary DeGaris; Library Subcommittee, Dr. J. M. Agar, Dr. J. P. Robinson and Dr. C. W. Gale; British Medical Association Subcommittee, Dr. H. T. Day, Dr. H. W. Hardy and Dr. G. A. Waterhouse.

The following is a brief report of the year's activities.

1. The main achievement was the setting up of a doctors' emergency call service, to which it is hoped all practitioners in Geelong will eventually belong. The Ambulance Service has agreed to run the bureau for a trial period without charge and doctors are participating in informal groups.

2. The British Medical Association library is to be donated to form the nucleus of a new reference library which will be established by the district hospital and which will be open to all doctors in the area.

3. Strong objection was and is still being made to the new National Health Service regulations.

4. A clinical meeting was held during August at Colac which was attended by a considerable gathering of doctors from throughout the Western District. Some evening meetings were held in Geelong for the benefit of local practitioners.

DAVID C. WALLACE,
Honorary Secretary.

Report of Sections.

Ear, Nose and Throat: Office-bearers— President, Dr. Raymond Hennessy; Vice-President, Dr. Clive Pyman; Treasurer, Dr. Frank Shanasy; Secretary, Dr. Rory Willis. Hospital representatives: Royal Melbourne, Dr. G. Swinburne; Alfred, Dr. Rex Blaubaum; Prince Henry's, Dr. Heyworth Watson; Royal Children's, Dr. C. Pyman; Saint Vincents, Dr. D. O'Brien; Eye and Ear, Dr. R. H. Stevens.

The following activities of the Section are reported:

Clinical meeting, November 26, 1953, held at the Victorian Eye and Ear Hospital.

Annual meeting, May 25, 1954, held at the Royal Melbourne Hospital, with an address by Dr. Arthur Schwieger entitled "Disorders of Equilibrium".

Meeting, June 29, 1954, held at the Victorian Eye and Ear Hospital, with an address by Dr. David Cossar entitled "Recent Ear, Nose and Throat Study in the United Kingdom".

Congress, August 16 to 19, 1954, held concurrently with the Otolaryngological Society of Australia (British Medical Association) and the Royal Australasian College of Surgeons.

RORY WILLIS,
Honorary Secretary.

The Ophthalmological Society of Australia (British Medical Association), Victorian Section: Office-bearers—President, Dr. T. a'B. Travers; Honorary Treasurer, Dr. Percy Cowen; Honorary Secretary, Dr. John L. Bignell.

Four meetings of the Victorian Section have been held over the past year, two of these being mainly clinical in nature.

The establishment of the library of the Ophthalmological Society of Australia in Melbourne has gone forward and is now actively functioning, providing a valuable source of reference including many current overseas ophthalmological and allied journals.

In conjunction with the Melbourne Permanent Post-Graduate Committee the Society has also established a long series of lectures for post-graduate instruction in ophthalmology.

Discussion on the visual standards for motor-drivers have also been held.

JOHN L. BIGNELL,
Honorary Secretary.

Radiology: Office-bearers—Chairman, Dr. E. Casey; Honorary Secretary, Dr. P. H. Davis; Honorary Assistant Secretary, Dr. Gwynne Villiers.

The section has been active during the year, monthly meetings being held on the fourth Tuesday of each month. Several guest speakers have addressed the Section, including Dr. Leonard Cox, Dr. John Hayward and Dr. Grayton Brown. Meetings have been well attended, especially by the younger members. Country members have also shown considerable interest.

PETER DAVIS,
Honorary Secretary.

Industrial Medicine: Office-bearers—Chairman, Dr. J. H. Gowland; Honorary Secretary, Dr. S. Crawcour; Honorary Treasurer, Dr. W. F. Cooper; Committee, Dr. D. O. Shiels, Dr. D. L. G. Thomas, Dr. R. Wilson, Dr. J. C. Lane, Dr. L Gurry.

At the October meeting of the Section the following office-bearers were elected for the ensuing year: Chairman, Dr. D. L. G. Thomas; Secretary, Dr. W. F. Cooper; Honorary Treasurer, Dr. R. Wilson; Committee, Dr. J. Gowlands, Dr. L. Joel, Dr. Leigh Wedlick, Dr. L. Gurry and Dr. D. Donald.

There are more than 40 members of the Section and members of the Branch have also been interested in the Section's meetings. The following meetings were held: Paper by Dr. Leigh Wedlick, "Use and Abuse of Physical Medicine in Industrial Injuries". Paper by Dr. W. F. Cooper, "Organization of a Part-Time Industrial Medical Service". Paper by Dr. N. L. Dodd, "Management of Industrial Cases Attending the Surgery". Paper by Mr. A. R. Wakefield, "Management of Common Hand Injuries".

An inspection of foundry operations at General Motors-Holden's and demonstrations of investigation of plant hazards by the Industrial Hygiene Department of the State Health Department were also held.

Bulletins compiled by the Industrial Hygiene Department have been distributed to members of the Section and have dealt with lead poisoning and cases noted in Victoria, recent cases in Victoria of industrial toxicological hazards and asbestosis.

Under the group leadership of Dr. H. K. Dougan, a party of fifth and final year medical students investigated plant operations and the Industrial Medical Department administration at Imperial Chemicals Institute, under the medical directorship of Dr. John Gowland, and at General Motors-Holden's, under the medical directorship of Dr. W. F. Cooper. These students are competing for a prize of fifty guineas for an essay entitled "The Role of the Industrial Medical Officer".

S. CRAWCOUR,
Honorary Secretary.

Preventive Medicine: Office-bearers—Chairman, Dr. S. Williams; Secretary, Dr. R. J. Farnbach; Committee, Dr. G. E. Cole, Dr. P. Gilbert and Dr. H. McLorinan.

Five meetings of the Section were held during the year, in the late afternoons in alternate months. The subjects have been of considerable interest, providing very good discussions, and the meetings well attended.

The speakers and the subjects of the meetings were as follows: Dr. N. H. Andrews, "Fluoridation of Water and its Place in the Prevention of Dental Caries". Dr. A. A. Ferris, "Immunization Against Poliomyelitis". Dr. D. M. McLean, "Influenza, 1954". Dr. A. R. Wakefield, "Some Thoughts on Preventive Accident Surgery". Dr. H. McLorinan, "The Changing Picture of Infectious Diseases".

R. J. FARNBACH,
Honorary Secretary.

Medical History: Shortly after the successful dinner given to Dr. Douglas Guthrie in November, 1953, approval was given by the Branch Council for the reestablishment of the Section of Medical History. A similar section, formed in 1931, had lapsed in the immediate pre-war years. Dr. H. Boyd Graham was elected Chairman, and Dr. D. M. O'Sullivan and Dr. Bryan Gandevia, Honorary Treasurer and Secretary respectively. The objects of the Section were defined as the furtherance of the study of medical history generally, and the preservation and collection of items of medico-historical interest in conjunction with the Branch museum and library.

Dr. Douglas Guthrie and several medical historians from other States have accepted invitations to become Honorary Associate Members of the Section.

During the year three papers have been read and discussed.

March 15: "George Thomas Howard: His Medico-Historical Activities", by Dr. H. Boyd Graham (subsequently published in THE MEDICAL JOURNAL OF AUSTRALIA, June 26, 1954).

June 7: "Past Relationships between the British Medical Association and the Friendly Societies in Victoria", by Dr. D. Roseby (manuscript and discussion preserved in the museum).

September 6: "James Thomas Rudall and His Diary for the Year 1858", by Dr. Bryan Gandevia (publication pending).

December 6: Dr. E. G. Robertson will read a paper entitled "An Anatomical Waxworks".

Towards the end of the year Dr. Gandevia was granted leave of absence, and Dr. O'Sullivan agreed to combine the duties of Secretary and Treasurer for the ensuing year. Members of the Branch who are interested are invited to contact him at the Royal Melbourne Hospital.

BRYAN GANDEVIA,
Honorary Secretary.

The Study of Allergic Diseases: Office-bearers—Chairman, Dr. Ivan Maxwell; Retiring Chairman, Dr. Charles Sutherland; Secretary-Treasurer, Dr. A. T. Murray; Executive members, Dr. Gerald Doyle and Dr. P. Ward Farmer.

The following is a brief report of the activities of the Section for the year ending September 30, 1954:

There are sixteen members of the Section. Five meetings were held during the year, these being: November, Dr. E. R. Trethewie, "Physiology of Asthma". March, Dr. C. Sutherland, "Asthma in Association with Chronic Infection". April, "Post-Graduate Symposium on Bronchial Asthma", Dr. Doyle, Dr. Sutherland and Dr. Maxwell. May, joint meeting with the Australian Society of Allergists. September, Dr. Gerald Doyle, "Food Allergy". The subjects chosen led to keen and interesting discussions.

ALAN MURRAY,
Honorary Secretary.

Clinical Pathology: Office-bearers—Chairman, Dr. J. D. Hicks; Honorary Secretary, Dr. R. A. Hayes; Honorary Treasurer, Dr. G. Harkness.

Throughout the year the Section held its regular meetings on the last Friday of February, May, August and November, and the meetings have been well attended.

This year, in cooperation with the Biochemistry Department of the University, the Section has also conducted a survey of some commonly performed tests in the various metropolitan laboratories.

R. A. HAYES,
Honorary Secretary.

On behalf of the Branch Council,

G. RALEIGH WEIGALL, President.
M. O. KENT-HUGHES, Honorary Secretary.
C. H. DICKSON, Medical Secretary.

At the conclusion of my year of office I wish to express the thanks of the Council and myself to the Medical Secretary, Dr. Dickson, the Assistant Secretary, Miss Corley, and the office staff for another year of loyal and efficient service.

G. RALEIGH WEIGALL, President.

Addendum.

The following reports are published on behalf of:

Melbourne Medical Post-Graduate Committee.

Over the period following the last report to the Branch, the activities of the committee have continued to run at a high level as shown in the following summary:

For the First Nine Months of 1954: total numbers attending courses and clinics, 532; numbers attending courses for higher qualifications, 149; numbers attending country courses (on reports received), 118; numbers attending courses by overseas lecturers, 214; numbers attending metropolitan refresher course, 57; numbers of whom the committee has arranged training overseas, 61.

Country Courses: The courses held in country centres have been very well attended. The number of such courses in 1954 was 17, this being an increase of two over the previous year. Warracknabeal was a welcome addition to the list; a successful meeting and a large attendance bore testimony to the efficiency of the local arrangements.

Course in Medicine: In collaboration with the teaching hospitals, special courses in higher medicine and surgery have now been instituted and should make special appeal to those interested in sitting for degrees or diplomas. The first of these, an eight weeks' course in medicine, organized and conducted by the Dean of the Medical School and members of the Alfred Hospital honorary medical staff, took place in July and August, 1954, and gained warm appreciation from those who attended, 15 in number.

Overseas Lecturers: The committee has been able to participate in courses given by a number of overseas lecturers in the past twelve months, largely as a result of its membership of the Australian Post-Graduate Federation in Medicine. One of the main functions of the Federation is to arrange and coordinate the visits of eminent medical

teachers from abroad. Among those from overseas who have given lectures in Melbourne have been:

From the United Kingdom: Mr. Rodney Maingot, Surgeon, Royal Free Hospital, London, "Peptic Ulcer". Dr. J. G. Scadding, Dean of the Institute of Diseases of Chest, London, "The Use and Abuse of Antibiotics in Respiratory Disease" and "Coughing Child". Dr. J. T. Ingram, Senior Dermatologist, General Infirmary, Leeds, and Lecturer on Skin Diseases in the University of Leeds, "Dermatological Reflections on the Quick and the Dead". Professor R. McWhirter, Radiotherapist, Royal Infirmary, Edinburgh, "Carcinoma of the Breast".

From the United States: Dr. Bradley Patten, Professor of Anatomy, Michigan, a lecture and film demonstration of unique interest on "Embryonic Heart Action". Dr. Robert Shaw, Clinical Association Professor of Thoracic Surgery, Dallas, Texas, "Cancer of the Lung". Professor E. B. Astwood, Research Professor of Medicine, Boston. Dr. Astwood was the Category A overseas lecturer of the Australian Post-Graduate Federation for 1954. During his two weeks' stay in Melbourne Dr. Astwood delivered four evening lectures on various aspects of endocrinology and visited clinical and research institutes. He contributed greatly to our knowledge of modern endocrinology and acted as a powerful stimulus to the profession as a whole.

General: The Post-Graduate Committee has now become so firmly established that there seems to be no need to emphasize in its title its permanent character. In future it will be known as "The Melbourne Medical Post-Graduate Committee".

During the year it was decided that certain former members of the committee who had rendered meritorious service and had been largely instrumental in establishing and maintaining the committee's activities, should be honoured in an appropriate way and be awarded the title of "Emeritus Councillor". Those selected include: Professor H. R. Dew, Dr. Konrad Hiller, Mr. Fay Maclure, Sir John Newman-Morris, Sir Wilberforce Newton, Dr. S. W. Patterson, Dr. A. E. Rowden White.

During the year Dr. I. C. Heinz has represented Dr. Leigh Forsyth (on leave of absence abroad) for the Repatriation Commission.

It is desired to record with deep regret the death of Dr. Douglas Thomas, who acted as representative of the army for many years, and was always keenly interested in the whole field of the committee's activities.

At the end of October, 1953, the executive of the Australian Post-Graduate Federation in Medicine was moved to Melbourne from Sydney, where it had been located since the inception of the Federation. This has entailed a considerable increase in the work performed by the secretary, Miss Nancy Davidson, B.A., and the office staff. The committee wishes to express appreciation of the way in which those concerned have carried out their duties.

The director returned from a tour overseas in November, 1953. During that time he was able to make many valuable post-graduate contacts in the United Kingdom, Canada and United States of America, and everywhere he received warm cooperation. Already this personal liaison has given proof of important results.

Annual Subscription: The number of subscribers continues to increase, and this year amounted to approximately 500.

Acknowledgements: The committee desires to acknowledge the cooperation of the various post-graduate committees of other States in its work, as well as of New Zealand.

In addition, the committee is greatly indebted to the Dermatological Association of Australasia, and the British Dermatological Association (Victorian Branch), the College of Radiologists of Australasia, the Australian Association of Psychiatrists, and the Victorian Section of the Ophthalmological Society of Australia, and, through the Post-Graduate Federation, to Sir Edward Hallstrom, who has generously donated the travel costs of Professor R. McWhirter throughout Australia.

British Medical Agency of Victoria, Proprietary, Limited.

The year ended June, 1954, was a successful one for the agency financially as well as in other directions.

Provision of *locum tenentes* continued to be the most difficult part of agency work. In the month of January only a very small proportion of those required could be provided, and in many cases new graduates who were waiting for resident appointments to commence in February were engaged. During February and March more men were available, but as they became absorbed into assistantships and practices a shortage again developed and during the "flu" months many sick general practitioners carried on under great strain. In Gippsland the wife of one doctor picked up patients in her car and brought them to hospital, where her husband prescribed from his sick bed.

The sale of practices in residential suburbs continues, but in the country practices are much more difficult to sell, despite most attractive terms. The present high gross incomes have tended to lead to departure from the old method of valuing goodwill, and the tendency now is to sell at net income rather than gross income.

Group practices are increasing, but in one direction seem to defeat their own object to a certain extent in that all members become so busy that no one of the group can take a vacation without a *locum tenens* being engaged.

The agency has been appointed as subagent for a firm of travel agents with a world-wide organization and is now in a position to provide advice and assistance in the planning of overseas tours, at the same time arranging for the care of the practice during the principal's absence.

Following the death of Dr. Douglas Thomas, Dr. L. H. Ball joined the directorate, which now comprises Major-General F. K. Norris, Dr. C. H. Dickson, Dr. G. S. Robinson and Dr. L. H. Ball.

The British Medical Insurance Company of Victoria, Limited.

The following is the annual report, over the signature of the chairman, Sir John Newman-Morris, submitted to members of the company at the ordinary general meeting, held on Monday, August 9, 1954.

The directors have pleasure in submitting for your approval the balance sheet, profit and loss account and appropriation account for the twelve months ended April 30, 1954.

The results of the year's operations (as disclosed in the profit and loss account) have not, in the opinion of the directors, been materially affected by any items of an abnormal character.

The total premiums written for the year were £75,775, as compared with £73,861 last year.

Net profit for the year was £6630 9s. 6d., after providing £1500 for taxation.

The appropriation account shows that £1634 was allocated during the year to various institutions connected with the medical profession.

Up to date the company has given books to the value of £2585 and £11,694 in cash to the Medical Society of Victoria, and more than £2275 to various sub-branches of the British Medical Association and other institutions connected with the medical profession. It has also taken up debentures of the Medical Society to the value of £3750, upon which it is accepting interest at the rate of only 1% *per annum*, which, of course, saves the Medical Society a considerable sum in interest.

The company has made the following loans to the Medical Society of Victoria: £3150 to finance a building purchase, £4000 to finance the purchase of an estate agency.

The directors feel that members of the British Medical Association will be interested to know of the benefits that they have received through the activities of this company, and feel sure that the knowledge will strengthen the already solid support given by the profession.

PRESENTATION OF GOLF TROPHIES.

The President announced the winners of the golf trophies: The Gerald Weigall Championship Cup, Dr. T. B. Ready; The David Roseby Handicap Cup, Dr. J. W. Gardiner; spoon for the best in-round, Dr. T. G. Swinburn; spoon for the best out-round, Dr. J. W. Gardiner. He presented the trophies to the winners.

INSTALLATION OF THE PRESIDENT FOR 1955.

The retiring President, Dr. G. Raleigh Weigall, vacated the chair and installed Dr. H. G. Furnell as President for the ensuing year. Dr. Furnell thanked the members for his election.

PRESIDENT'S ADDRESS.

Dr. G. Raleigh Weigall then read the retiring president's address (see page 125). The President, Dr. H. G. Furnell, thanked Dr. Weigall for his address.

VOTES OF THANKS.

On the motion of Sir John Newman-Morris a vote of thanks was extended to the retiring members of Council: Dr. C. W. Johnston, Dr. L. A. Neal, Dr. C. A. M. Renou, Major-General F. Kingsley Norris and Sir Peter MacCallum.

FEDERAL COUNCIL MEDICAL MONOGRAPH FUND.

THE following is a second list of donations received for the Federal Council Medical Monograph Fund. The first list was published in the issue of August 21, 1954:

£105: Medical Society of Victoria.

£25: Imperial Chemical Industries of Australia and New Zealand, Limited.

£10 10s.: Anonymous, Dr. Ida Birchall, Sir Charles Blackburn, Dr. R. J. Silverton, Dr. T. G. Swinburne.

£5 5s. 6d.: Dr. C. Colvin, Dr. W. E. L. H. Crowther, Dr. P. A. Earnshaw.

£5 5s.: Dr. H. F. Bettinger, Sir Norman Gregg, Professor C. G. Lambie, Dr. K. C. T. Rawle, Dr. E. R. White.

£2 2s. 6d.: Professor S. D. Rubbo.

£2 2s.: Dr. J. L. Bignell, Professor W. K. Inglis, Dr. K. S. Jones, Dr. L. O. S. Poidevin, Dr. W. C. T. Upton, Dr. A. B. K. Watkins, Dr. E. M. Wilson.

£1 1s.: Dr. K. J. B. Davis, Dr. B. G. Wade.

Total: £2298 15s. 9d.

Correspondence.

FOCLA POST-GRADUATE COURSE AT WOLLONGONG.

SIR: I should like to draw the attention of your readers to the Federation of Country Local Associations' annual post-graduate course, to be held at Wollongong from March 14 to 18 inclusive. This function is becoming more popular each year, as members begin to appreciate its unique features, in that it combines a very comprehensive post-graduate course with a very congenial social programme, in which the wives and families of the visitors mingle in the various social functions with members and their wives of the host association. Wollongong's unsurpassed tourist attractions provide an opportunity to make the course part of a summer holiday.

FOCLA is extremely grateful to, and publicly thanks, the Post-Graduate Committee in Medicine for the wonderful help extended in arranging these courses. This year we are particularly fortunate in having made available to us the visiting American, Professor Kern. In addition, there is a galaxy of Sydney talent provided, as well as a well-known Melbourne specialist. It only remains to say that all members of the Association wishing to attend are welcome, and those interested should contact the Course Secretary, Dr. J. D. Maude, Church Street, Wollongong (B 1905), for reservations.

Yours, etc.,

Bulli, B. A. COOK, Chairman.
New South Wales.

THE MISUSE OF ANTIBIOTICS.

SIR: Despite repeated warnings in the Press and in medical journals by earnest and authoritative physicians concerning the widespread and indiscriminate use of expensive "life-saving" antibiotics, this practice appears to be increasing with the appearance of every new drug of this nature. "Aureomycin", "Chloromycetin", "Terramycin" *et cetera* are being prescribed in many cases, often at the request of the patient, for quite simple ailments. The two worst effects of this are the danger of these drugs losing their potency against really serious diseases and the tremendous additional cost of such wastage to the Government.

I suggest that a great saving in time and money could be effected by providing large bins in civic centres filled with various antibiotics. These could be available at any hour, and perhaps such captions as "chequered capsules for chronic cough" or "pale pills for persistent pyrexia" would aid the patient in his selection if this was really considered necessary.

Advantages in such a scheme would be as follows: (i) The patient would not have to search for a doctor if feeling off colour; this could prove very difficult at night or over week-ends. (ii) Medical fees would be saved by the patient. (iii) The poor harassed practitioner's time would be spared for other things. (iv) There would be no need for the doctor to perjure his soul by writing down a diagnosis of "virus pneumonia" in order to obtain speedy relief of a mystifying cough or elevated temperature. (v) The chemist's valuable time and profit could be saved, and a whole multitude of forms could be dispensed with.

It would be most interesting to review all the cases of "virus flu" or "atypical pneumonia" so diagnosed in order to obtain the more expensive antibiotics for their treatment. Many of these cases are so "atypical" that they present with neither inflammation nor consolidation of the lungs. I have heard of one patient with a discharging ear who was diagnosed as "virus pneumonia" in order to obtain "Chloromycetin" for local application.

Many patients are going to get these expensive antibiotics anyhow, so why not make them more easily available? One should try not to worry about the dissemination of drug-resistant organisms amongst the population as a result of using small doses for minor ailments, or the fact that many cases of tuberculosis and lung carcinoma are masked by these drugs, because in a few years' time they will be useless anyhow, and scientists will undoubtedly turn out newer and better agents to combat virulent infections.

Surely the practice of medicine has not deteriorated so far as to be dictated to by patients' demands for drugs, or that a diagnostically destitute physician should resort to indiscriminate treatment in order to cover up his ignorance. We should know for what infections these most precious "life-saving" agents are specific. Why not reserve them for this purpose?

Yours, etc.,

The Morris Hospital, R. MUNRO FORD.
Northfield,
South Australia.
December 24, 1954.

SOME CURRENT ANÆSTHETIC PROBLEMS.

SIR: I should like to thank Professor E. S. Meyers (M. J. AUSTRALIA, December 25, 1954) for his remarks arising out of the Embley Memorial Lecture. His questions are exercising the minds of all who have to do with the teaching of anæsthesia both here and abroad.

The basic general anæsthetic agent for that worthy person the outback practitioner who has to cope with anæsthesia and surgery single-handed is still in the majority of cases ether. If, however, he has been trained in its use with some simple apparatus based on sound physiological lines, his results, I maintain, will be better; and the onset of his hypertension and grey hairs will be retarded by watching, from the "other end", the rhythmical movements of a breathing bag rather than by waiting for the colour of the blood to change in his operating field before taking action.

The anæsthetic problems of the "family doctor" in every-day practice are very real. At present the temptation is great to adopt some of the easily available modern advances without adequate instruction and with sometimes dire results. This can only be met with by extending under-graduate instruction and increasing facilities for post-graduate teaching. Over the last few years the realistic attitude has been adopted in many teaching centres of instructing undergraduates in "Pentothal" induction on the wise principle that at least they will have some basic training in a method which they will most assuredly use in private practice. It is surely only an extension of this principle to embrace some of the other modern advances. The only alternative seems to be the creation of anæsthesia as a post-graduate study, which at present in this country is a practical impossibility.

Teaching and research are intimately bound up with the provision of departments of anæsthesia. These to be efficient must be administered by highly qualified directors and adequately staffed by registrars and visiting anæsthetists. The economics appear to be coped with satisfactorily in at least some of those at present functioning in Australia.

Apart from the value of these departments in undergraduate and post-graduate teaching it seems the only practical source from which the future specialist will emerge.

Professor Meyers quotes the recent report by Beecher and Todd which was somewhat devastating in its findings to modern anæsthesia. Some of the fallacies of the report have already had comment from correspondence in this column. The mortality rate from anæsthesia may be greater in the United States than that from poliomyelitis. The mortality rate from the motor-car is doubtless still greater, but the obvious way to reduce this would seem to be the better education of the driver.

Yours, etc.,

Perth, Western Australia, January 6, 1955. G. R. TROUP.

INDUCTION OF LABOUR.

SIR: I am grateful to Professor Adam for his letter on "Induction of Labour" in your journal of the 11th instant. I was not concerned so much about the method of induction as the conditions necessary before one attempts it. Of the four points enumerated in my letter of October 11, first paragraph, only the question of a "ripe" cervix has been answered.

In the concluding paragraph of his letter Professor Adam does not state whether inducing labour as a routine in Rh-negative women with agglutinins is correct or not. Where there is no history of *erythroblastosis fœtalis* it is not possible to forecast with any accuracy what to expect in any given case, and to deliberately cause the premature birth of an infant seems to me meddlesome midwifery, for such an infant may be quite free of hæmolytic disease but is made to be born with a serious handicap.

Adverting to the Professor's advice about where such a case should be induced, it has struck me forcibly that this question of rhesus incompatibility is not yet known or understood by women as it ought to be, sir, and the phase of their education and breaking down of resistance has yet to come. It is not easy, for instance, to convince women in this back of the beyond that they should plan to have their babies at the obstetric centre of the Townsville General Hospital rather than by a private doctor.

Yours, etc.,

District Hospital, Boulia, Queensland. December 18, 1954. B. J. BOUCHÉ.

Special Correspondence.

NEW ZEALAND LETTER.

FROM OUR SPECIAL CORRESPONDENT.

Post-Graduate Chair of Obstetrics and Gynæcology in Auckland University.

MR. HARVEY M. CAREY, M.Sc., M.B. (Sydney), M.R.C.O.G., F.R.C.S. (Ed.), F.R.A.C.S., who has been Acting Professor since Professor Spence Smyth resigned early this year, has been appointed to the Post-Graduate Chair of Obstetrics and Gynæcology in Auckland University College. The appointment carries also the medical directorship of the National Women's Hospital under the Auckland Hospital Board. Professor Carey was born in New Zealand and qualified from the University of Sydney, having held a part-time lectureship in physiology and biochemistry. After resident posts at the Royal Hospital for Women, Sydney, and Queen's Park Hospital, Blackburn, Lancashire, he spent four years as senior registrar in obstetrics and gynæcology at the Post-Graduate School, Hammersmith, during which time he worked for a year at Johns Hopkins Hospital, Department of Obstetrics. He began work in New Zealand as assistant in the professorial unit early in 1954. From 1943 to 1945 he served in the Royal Australian Air Force as officer commanding No. 1 Aviation Medicine Section.

Already known as an able teacher and ardent research worker, Professor Carey plans a vigorous programme of

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED JANUARY 1, 1955.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	..	3(3)	5(1)	..	1(1)	..	..	..	9
Amœbiasis	..	..	1	..	..	..	1	..	2
Ancylostomiasis	..	..	..	..	..	..	..	..	..
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	1(1)	..	..	..	..	..	..	1
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	2(1)	..	..	..	..	..	..	2
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	..	9(9)	3(3)	..	1(1)	..	..	..	13
Diphtheria	2	1	2(2)	..	3(3)	..	..	..	8
Dysentery (Bacillary)	..	1(1)	5(5)	..	..	..	1	..	7
Encephalitis	..	1(1)	1	..	..	..	..	..	2
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	30(9)	18(13)	..	..	..	..	..	..	48
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	1	..	1
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	1(1)	1	2	..	..	..	..	..	4
Ophthalmia	..	..	..	..	2	..	..	..	2
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	4(4)	10(4)	4(1)	..	1(1)	3(2)	..	1	23
Puerperal Fever	..	1	3(3)	..	..	..	..	1	5
Rubella	..	16(12)	1(1)	..	5(5)	..	..	..	22
Salmonella Infection	..	..	..	..	1(1)	..	..	..	1
Scarlet Fever	4(3)	16(13)	3	..	..	1(1)	..	..	24
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..
Trachoma	..	..	..	..	2	..	..	..	2
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	7(3)	23(19)	6	..	4(3)	..	..	..	40
Typhoid Fever	..	1	..	..	..	..	..	..	1
Typhus (Flea-, Mite- and Tick-borne)	..	..	1	..	1	..	..	..	2
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

short and longer teaching courses for practitioners in obstetrics, utilizing the help of the now numerous distinguished overseas visitors. He has published papers on the use of ion-exchange resins, oxytocics and fœtal distress, and is quoted in the literature touching the recording of uterine activity under various conditions with modern instruments. It is hoped to continue this work, and a study on preeclampsia and hypertension is forthcoming. Planning for the new Women's Hospital to be built adjacent to Green Lane Hospital will also occupy his attention.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 76, of December 16, 1954.

AUSTRALIAN MILITARY FORCES.

Australian Regular Army.

Royal Australian Army Medical Corps.

The Short Service Commission granted to 2/40173 Captain H. T. Gage is extended until 8th July, 1956.

Citizen Military Forces.

Eastern Command: Second Military District.

Royal Australian Army Medical Corps (Medical).—The resignation of 2/146603 Captain B. L. Reid of his commission is accepted, 8th September, 1954.

Tasmania Command: Sixth Military District.

Royal Australian Army Medical Corps (Medical).—6/15256 Captain M. G. Ciezar is placed upon the Retired List (6th Military District) with permission to retain his rank and wear the prescribed uniform, 19th October, 1954.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps.

2nd Military District.—To be Honorary Captain, 22nd October, 1954: William Horon Kelly. The resignation of Honorary Captain B. N. Goodman of his commission is accepted, 18th October, 1954. Honorary Captain K. L. Collins is retired, 28th August, 1954. The notification respecting Major H. O. G. Selle which appeared in Executive Minute No. 148 of 1954, promulgated in *Commonwealth Gazette* No. 51 of 1954, is withdrawn.

3rd Military District.—To be Captain, 2nd October, 1954: Robert Ernest Davies. The resignations of the following officers of their commissions are accepted: Honorary Captain J. R. Officer, 14th September, 1954, and Captain R. W. Greville, 7th October, 1954.

Congresses.

AUSTRALIAN AND NEW ZEALAND ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE thirty-first meeting of the Australian and New Zealand Association for the Advancement of Science will be held at the University of Melbourne from August 17 to 24, 1955. Further information may be obtained from Mr. N. H. Olver, the Honorary Secretary for the Melbourne meeting, University of Melbourne, Carlton, N.3, Victoria.

THE ACADEMY OF PSYCHOSOMATIC MEDICINE.

THE second annual meeting of the Academy of Psychosomatic Medicine will be held at the Hotel Plaza, New York, on October 6, 7 and 8, 1955. The general subject of the meeting will be "The Psychosomatic Aspects of Drug Administration". Those who wish to present papers at this meeting are invited to communicate with the programme chairman, Dr. Ethan Allan Brown, 75 Bay State Road, Boston 15, Massachusetts, from whom application forms for Fellowship and a copy of the constitution may also be obtained.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Graham, Philip Alastair, M.B., B.S., 1953 (Univ. Sydney), Commercial Bank Chambers, Fitzroy Street, Tamworth, New South Wales.

Bennett, Michael Francis, M.B., B.Ch., 1952 (N.U. Irel.), H.M.A.S. *Tarangau*, c.o. G.P.O., Sydney.

Deaths.

THE following death has been announced:

JAMES.—Ian Clinton James, on January 11, 1955, at Hawthorn, Victoria.

Diary for the Month.

FEB. 1.—New South Wales Branch, B.M.A.: Organization and Science Committee.
FEB. 2.—Western Australian Branch, B.M.A.: Branch Council Meeting.
FEB. 4.—Queensland Branch, B.M.A.: Clinical Meeting.
FEB. 8.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital; all contract practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Tasmania: Part-time specialist appointments for the north-west coast of Tasmania.

Editorial Notices.

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